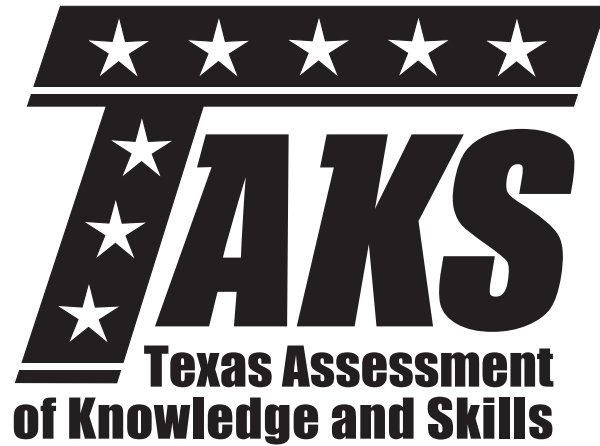


STUDENT NAME _____



EXIT LEVEL
ENGLISH LANGUAGE ARTS
MATHEMATICS
SCIENCE
SOCIAL STUDIES

Administered February 2006

READING AND WRITTEN COMPOSITION

DIRECTIONS

Read the two selections and the viewing and representing piece. Then answer the questions that follow.

The First Day

by Edward P. Jones

1 In an otherwise unremarkable September morning, long before I learned to be ashamed of my mother, she takes my hand and we set off down New Jersey Avenue to begin my very first day of school. I am wearing a checkeredlike blue-and-green cotton dress, and scattered about these colors are bits of yellow and white and brown. My mother has uncharacteristically spent nearly an hour on my hair that morning, plaiting and replaiting so that now my scalp tingles. Whenever I turn my head quickly, my nose fills with the faint smell of Dixie Peach hair grease. The smell is somehow a soothing one now and I will reach for it time and time again before the morning ends. All the plaits, each with a blue barrette near the tip and each twisted into an uncommon sturdiness, will last until I go to bed that night, something that has never happened before. My stomach is full of milk and oatmeal sweetened with brown sugar. Like everything else I have on, my pale green slip and underwear are new, the underwear having come three to a plastic package with a little girl on the front who appears to be dancing. Behind my ears, my mother, to stop my whining, has dabbed the stingiest bit of her gardenia perfume, the last present my father gave her before he disappeared into memory. Because I cannot smell it, I have only her word that the perfume is there. I am also wearing yellow socks trimmed with thin lines of black and white around the tops. My shoes are my greatest joy, black patent-leather miracles, and when one is nicked at the toe later that morning in class, my heart will break.

My notes about what I am
reading

2 I am carrying a pencil, a pencil sharpener, and a small ten-cent tablet with a black-and-white speckled cover. My mother does not believe that a girl in kindergarten needs such things, so I am taking them only because of my insistent whining and because they are presents from our neighbors, Mary Keith and Blondelle Harris. Miss Mary and Miss Blondelle are watching my two younger sisters until my mother returns. The women are as precious to me as my mother and sisters. Out playing one day, I have overheard an older child, speaking to another child, call Miss Mary and Miss Blondelle a word that is brand new to me. This is my mother: When I say the word in fun to one

of my sisters, my mother slaps me across the mouth and the word is lost for years and years.

My notes about what I am
reading

3 All the way down New Jersey Avenue, the sidewalks are teeming with children. In my neighborhood, I have many friends, but I see none of them as my mother and I walk. We cross New York Avenue, we cross Pierce Street, and we cross L and K, and still I see no one who knows my name. At I Street, between New Jersey Avenue and Third Street, we enter Seaton Elementary School, a timeworn, sad-faced building across the street from my mother's church, Mt. Carmel Baptist.

4 Just inside the front door, women out of the advertisements in *Ebony*¹ are greeting other parents and children. The woman who greets us has pearls thick as jumbo marbles that come down almost to her navel, and she acts as if she had known me all my life, touching my shoulder, cupping her hand under my chin. She is enveloped in a perfume that I only know is not gardenia. When, in answer to her question, my mother tells her that we live at 1227 New Jersey Avenue, the woman first seems to be picturing in her head where we live. Then she shakes her head and says that we are at the wrong school, that we should be at Walker-Jones.

5 My mother shakes her head vigorously. "I want her to go here," my mother says. "If I'da wanted her someplace else, I'da took her there." The woman continues to act as if she has known me all my life, but she tells my mother that we live beyond the area that Seaton serves. My mother is not convinced and for several more minutes she questions the woman about why I cannot attend Seaton. For as many Sundays as I can remember, perhaps even Sundays when I was in her womb, my mother has pointed across I Street to Seaton as we come and go to Mt. Carmel. "You gonna go there and learn about the whole world." But one of the guardians of that place is saying no, and no again. I am learning this about my mother: The higher up on the scale of respectability a person is—and teachers are rather high up in her eyes—the less she is liable to let them push her around. But finally, I see in her eyes the closing gate, and she takes my hand and we leave the building. On the steps, she stops as people move past us on either side.

6 "Mama, I can't go to school?"

7 She says nothing at first, then takes my hand again and we are down the steps quickly and nearing New Jersey

¹ *Ebony* is a magazine for African Americans. For many years it was the one national publication that featured stylish black women and men in advertisements.

Avenue before I can blink. This is my mother: She says, “One monkey don’t stop no show.”²

My notes about what I am
reading

8 Walker-Jones is a larger, newer school and I immediately like it because of that. But it is not across the street from my mother’s church, her rock, one of her connections to God, and I sense her doubts as she absently rubs her thumb over the back of her hand. We find our way to the crowded auditorium where gray metal chairs are set up in the middle of the room. Along the wall to the left are tables and other chairs. Every chair seems occupied by a child or adult. Somewhere in the room a child is crying, a cry that rises above the buzz-talk of so many people. Strewn about the floor are dozens and dozens of pieces of white paper, and people are walking over them without any thought of picking them up. And seeing this lack of concern, I am all of a sudden afraid.

9 “Is there where they register for school?” my mother asks a woman at one of the tables.

10 The woman looks up slowly as if she has heard this question once too often. She nods. She is tiny, almost as small as the girl standing beside her. The woman’s hair is set in a mass of curlers and all of those curlers are made of paper money, here a dollar bill, there a five-dollar bill. The girl’s hair is arrayed in curls, but some of them are beginning to droop and this makes me happy. On the table beside the woman’s pocketbook is a large notebook, worthy of someone in high school, and looking at me looking at the notebook, the girl places her hand possessively on it. In her other hand she holds several pencils with thick crowns of additional erasers.

11 “These the forms you gotta use?” my mother asks the woman, picking up a few pieces of the paper from the table. “Is this what you have to fill out?”

12 The woman tells her yes, but that she need fill out only one.

13 “I see,” my mother says, looking about the room. Then: “Would you help me with this form? That is, if you don’t mind.”

14 The woman asks my mother what she means.

15 “This form. Would you mind helpin me fill it out?”

16 The woman still seems not to understand.

² An African American proverb reflecting the importance of perseverance despite difficulties. This proverb has been popularized as the title of several twentieth-century blues songs and theatrical productions.

17 “I can’t read it. I don’t know how to read or write, and I’m askin you to help me.” My mother looks at me, then looks away. I know almost all of her looks, but this one is brand new to me. “Would you help me, then?”

18 The woman says Why sure, and suddenly she appears happier, so much more satisfied with everything. She finishes the form for her daughter and my mother and I step aside to wait for her. We find two chairs nearby and sit. My mother is now diseased, according to the girl’s eyes, and until the moment her mother takes her and the form to the front of the auditorium, the girl never stops looking at my mother. I stare back at her. “Don’t stare,” my mother says to me. “You know better than that.”

19 Another woman out of the *Ebony* ads takes the woman’s child away. Now, the woman says upon returning, let’s see what we can do for you two.

20 My mother answers the questions the woman reads off the form. They start with my last name, and then on to the first and middle names. This is school, I think. This is going to school. My mother slowly enunciates each word of my name. This is my mother: As the questions go on, she takes from her pocketbook document after document, as if they will support my right to attend school, as if she has been saving them up for just this moment. Indeed, she takes out more papers than I have ever seen her do in other places: my birth certificate, my baptismal record, a doctor’s letter concerning my bout with chicken pox, rent receipts, records of immunization, a letter about our public assistance payments, even her marriage license—every single paper that has anything even remotely to do with my five-year-old life. Few of the papers are needed here, but it does not matter and my mother continues to pull out the documents with the purposefulness of a magician pulling out a long string of scarves. She has learned that money is the beginning and end of everything in this world, and when the woman finishes, my mother offers her fifty cents, and the woman accepts it without hesitation. My mother and I are just about the last parent and child in the room.

21 My mother presents the form to a woman sitting in front of the stage, and the woman looks at it and writes something on a white card, which she gives to my mother. Before long, the woman who has taken the girl with the drooping curls appears from behind us, speaks to the sitting woman, and introduces herself to my mother and

me. She's to be my teacher, she tells my mother. My mother stares.

My notes about what I am
reading

22 We go into the hall, where my mother kneels down to me. Her lips are quivering. "I'll be back to pick you up at twelve o'clock. I don't want you to go nowhere. You just wait right here. And listen to every word she say." I touch her lips and press them together. It is an old, old game between us. She puts my hand down at my side, which is not part of the game. She stands and looks a second at the teacher, then she turns and walks away. I see where she has darned one of her socks the night before. Her shoes make loud sounds in the hall. She passes through the doors and I can still hear the loud sounds of her shoes. And even when the teacher turns me toward the classrooms and I hear what must be the singing and talking of all the children in the world, I can still hear my mother's footsteps above it all.

"THE FIRST DAY" from LOST IN THE CITY by EDWARD P. JONES. Copyright © 1992 by EDWARD P. JONES. Reprinted by permission of HarperCollins Publishers, Inc., WILLIAM MORROW.

Students read a selection titled “Unforgettable Miss Bessie” and then answered questions 12–25 that follow on pp. 17–19 of this document.

Due to copyright restrictions, this selection cannot be released to the public electronically. However, it is available via paper copy in the *Texas Assessment of Knowledge and Skills Exit Level English Language Arts Released Test, February 2006*. Please see your district for more information.

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How to Be AN EFFECTIVE MENTOR



LISTEN PATIENTLY Give a young person enough time to explain what he or she thinks and feels.

BUILD A RELATIONSHIP Don't expect to earn a person's trust immediately. Schedule time regularly to talk or just hang out.

NURTURE SELF-SUFFICIENCY Encourage confidence and independent thinking.

BE CONSTRUCTIVE Provide feedback regularly. Be honest with praise and kind when delivering words of criticism.

SHARE YOURSELF Invite the person you are mentoring to observe you at work. Share your failures as well as your successes.

Sponsored by Community Council on Literacy

Photograph courtesy of © LWA-JDC/CORBIS.

Use “The First Day” (pp. 4–8) to answer questions 1–11.

- 1** Read the following dictionary entry.

lost \ˈlɒst\ *adj* **1.** unable to find one’s way
2. no longer known or practiced **3.** lacking self-confidence **4.** not used to one’s benefit or advantage

Which definition best matches the meaning of the word *lost* as it is used in paragraph 2?

- A** Definition 1
- B** Definition 2
- C** Definition 3
- D** Definition 4

- 2** After receiving help from another woman in filling out the form, the mother —

- F** seems ashamed and embarrassed
- G** offers to return the favor
- H** thanks the woman
- J** gives the woman fifty cents

- 3** In order to stop her daughter from whining, the mother —

- A** threatens to punish her
- B** lets her wear perfume
- C** plays a game with her
- D** buys her new shoes

- 4** In paragraph 20, the word *enunciates* means —

- F** reads
- G** remembers
- H** explains
- J** pronounces

- 5** Why does the Walker-Jones school make the narrator’s mother tense?

- A** The teachers do not treat the mother with respect.
- B** The walls of the building need to be repaired.
- C** The school is far away from the mother’s church.
- D** The auditorium is too crowded and messy.

- 6** In paragraph 7, the author uses the phrase “before I can blink” to show that the narrator —

- F** seems surprised by her mother
- G** is being rushed by her mother
- H** is beginning to cry
- J** feels afraid of New Jersey Avenue

- 7 What can the reader conclude from the mother's actions in paragraphs 11–17?
- A The mother is relieved that her daughter will be able to register for school.
 - B The daughter feels powerless while her mother asks for help.
 - C The woman teases the mother until she admits she cannot read or write.
 - D The mother is willing to risk humiliation to help her daughter.

- 8 A source of conflict for the narrator's mother is —
- F her lack of communication with her daughter
 - G her inability to read and write
 - H the cost of sending her daughter to school
 - J the memory of her ex-husband

- 9 In paragraph 5, the author uses the term “the closing gate” to suggest that the mother —
- A has realized that her daughter will not be admitted to Seaton
 - B has lowered her eyelids in frustration and anger
 - C is watching the woman at Seaton close the front door
 - D is figuring out how to find another way into the building

- 10 Based on the evidence in paragraph 3, the reader can conclude that —
- F the mother and daughter are lost
 - G the mother's church is dirty and run-down
 - H the daughter's friends are at a different school
 - J the daughter's friends are avoiding her

- 11 Which of the following sentences is an example of cause and effect?
- A *When I say the word in fun to one of my sisters, my mother slaps me across the mouth and the word is lost for years and years.*
 - B *She finishes the form for her daughter and my mother and I step aside to wait for her.*
 - C *Somewhere in the room a child is crying, a cry that rises above the buzz-talk of so many people.*
 - D *We go into the hall, where my mother kneels down to me.*

**Use “Unforgettable Miss Bessie” (pp. 9–13)
to answer questions 12–22.**

12 What is this selection mainly about?

- F** A successful journalist remembers the difficult challenges he overcame many years ago in high school.
- G** A former student is surprised when he visits his old high school teacher.
- H** A former student remembers the high school teacher who taught him the real meaning of education.
- J** A woman born into poverty becomes an inspirational high school teacher.

13 Where was Miss Bessie when she learned the importance of a good education?

- A** Bernard High School
- B** Trinity School
- C** Normal School
- D** Fisk University

14 In addition to regular school lessons, Miss Bessie also taught the author how —

- F** to gain access to books in the town library
- G** to stand up to peer pressure
- H** to play the piano
- J** to work as a newspaper delivery boy

15 What is paragraph 15 mainly about?

- A** The author found a way to study even in very difficult conditions.
- B** The author enjoyed reading classic literature by lamplight.
- C** The author’s family lived in poverty without benefit of electricity.
- D** The author’s father built their small house with very little money.

16 The author read whatever Miss Bessie told him to read because —

- F** he was afraid that she would punish him if he didn’t
- G** he felt guilty that she smuggled books out of the town library for him
- H** she convinced him that he could be a better poet than Shakespeare
- J** she said that his dreams depended on his ability to read and write well

17 Miss Bessie could be characterized as —

- A happy and carefree
- B angry and spiteful
- C strict but kind
- D lenient but unforgiving

18 What conflict led the author to work as a delivery boy?

- F He wanted to learn about being a journalist.
- G He wanted to buy a new overcoat.
- H His family needed help paying the bills.
- J His family couldn't afford to buy newspapers.

19 In paragraph 25, the words “rippled out across generations” suggest that Miss Bessie’s influence —

- A was fading as time passed
- B had more impact on her students than anything else they experienced
- C could not be measured until she passed away
- D affected many people over time

20 When Miss Bessie caught the author helping Buster Martin cheat, she didn’t punish the boys because she —

- F was too upset to speak
- G was amused by their behavior
- H felt proud that they were working together
- J realized the test question was too difficult

21 Which of the following can the reader conclude from the information in paragraph 27?

- A Miss Bessie would have been better as a college teacher.
- B Teachers can’t handle classrooms without laughter and love.
- C The way Miss Bessie taught had more effect than the lessons themselves.
- D A high school education is more important than a college education.

22 Miss Bessie probably never talked about her educational background because —

- F she had difficulty communicating with her students
- G she knew her students were not interested in her childhood
- H she didn’t believe a college degree was very important
- J she was embarrassed that she never attended Fisk University

**Use “The First Day” and “Unforgettable Miss Bessie” (pp. 4–13)
to answer questions 23–25.**

- 23** Both the mother in “The First Day” and Miss Bessie show their commitment to education by —
- A** refusing to tolerate bad language or poor grammar
 - B** encouraging children to read as much as possible
 - C** doing whatever is necessary to provide an opportunity for others
 - D** telling children what they should value in their own lives
- 24** What is different about the time covered by each selection?
- F** “The First Day” is about a single day, but “Unforgettable Miss Bessie” takes place over many years.
 - G** “The First Day” is about kindergarten, but “Unforgettable Miss Bessie” is about high school.
 - H** “Unforgettable Miss Bessie” is set in the past, but “The First Day” is set in the present.
 - J** “Unforgettable Miss Bessie” is about remembering, but “The First Day” is about forgetting.
- 25** What is similar about the narrators in the two selections?
- A** They grew up without fathers.
 - B** They had several brothers and sisters.
 - C** Their parents did not get a good education.
 - D** Their childhood homes were very small.

**Use the visual representation on page 14
to answer questions 26–28.**

26 Which of these best states the purpose of the flyer?

- F** To convince readers that mentor programs need more money
- G** To inform readers about different ways to be a good mentor
- H** To entertain readers by relating the experiences of one mentor
- J** To show readers a variety of ways they can become mentors

27 This flyer appeals to the viewer's —

- A** need for entertainment
- B** desire to earn money
- C** sense of community responsibility
- D** search for personal recognition

28 The designer of this flyer most likely chose the photograph —

- F** to show that most mentors are women
- G** to emphasize the importance of academics
- H** to illustrate the relationships between mentors and children
- J** to persuade parents to buy computers for children

DIRECTIONS

Answer the following questions in the space provided on the answer document.

- 29 How does the mother in “The First Day” show how much she cares for her daughter? Support your answer with evidence from the selection.
- 30 Do you think Miss Bessie was a good teacher? Explain your answer and support it with evidence from the selection.
- 31 How is education important in “The First Day” and “Unforgettable Miss Bessie”? Support your answer with evidence from **both** selections.

WRITTEN COMPOSITION

Write an essay about the effect that someone you admire can have on your life.

The information in the box below will help you remember what you should think about when you write your composition.

REMEMBER—YOU SHOULD

- ☐ write about the assigned topic
- ☐ make your writing thoughtful and interesting
- ☐ make sure that each sentence you write contributes to your composition as a whole
- ☐ make sure that your ideas are clear and easy for the reader to follow
- ☐ write about your ideas in depth so that the reader is able to develop a good understanding of what you are saying
- ☐ proofread your writing to correct errors in spelling, capitalization, punctuation, grammar, and sentence structure

USE THIS PREWRITING PAGE TO
PLAN YOUR COMPOSITION.

MAKE SURE THAT YOU WRITE YOUR COMPOSITION ON
THE TWO LINED PAGES IN THE ANSWER DOCUMENT.

USE THIS PREWRITING PAGE TO
PLAN YOUR COMPOSITION.

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PLAN YOUR COMPOSITION.

MAKE SURE THAT YOU WRITE YOUR COMPOSITION ON
THE TWO LINED PAGES IN THE ANSWER DOCUMENT.

Revising and Editing Sample

DIRECTIONS

Read the introduction and the passage that follows. Then read each question and fill in the correct answer on page 2 of your answer document.

Lydia has written this report for her U.S. history class. As part of a peer conference, you have been asked to read the report and think about what suggestions you would make. When you finish reading the report, answer the questions that follow.

The American Red Cross

(1) The American Red Cross is an organization that aids people all around the world. (2) It started as a result of the efforts of a dedicated woman. (3) That woman was named Clara Barton. (4) It was during the Civil War that Barton began the work that lead to the establishment of the American Red Cross. (5) She assisted on the battlefield by nursing injured soldiers and helping transport supplies. (6) Eventually the Government of the United States selected her to serve as superintendent of nurses for the army.

- S-1** What is the most effective way to combine sentences 2 and 3?
- A** It started as a result of the efforts of a dedicated woman, that woman was named Clara Barton.
 - B** It started as a result of the efforts of a woman who was dedicated and named Clara Barton.
 - C** It started as a result of the efforts of a dedicated woman named Clara Barton.
 - D** It started as a result of the efforts of a dedicated woman she was named Clara Barton.

- S-2** What change, if any, should be made in sentence 4?

- F** Change *was* to **is**
- G** Insert a comma after *Civil War*
- H** Change *lead* to **led**
- J** Make no change

- S-3** What change, if any, should be made in sentence 6?

- A** Change *Government* to **government**
- B** Change *selected* to **select**
- C** Change *her* to **herself**
- D** Make no change



REVISING AND EDITING

DO NOT GO ON TO THE REVISING AND EDITING SECTION.
WHEN YOU FINISH THE READING AND WRITTEN
COMPOSITION SECTION, RAISE YOUR HAND AND WAIT
FOR A TEST ADMINISTRATOR TO ASSIST YOU.



DIRECTIONS

Read the following passages and mark your answers on page 2 of your answer document. Remember that you are NOT permitted to use dictionaries or other reference materials on this section of the test.

John read about a new invention and wrote this paper. Read John's paper and think about the corrections and improvements he should make. When you finish reading, answer the questions that follow.

Seeing with Sound

(1) According to a British news report, some blind people may finally get a chance to “see.” (2) They are not learning to see with their eyes; they are learning to see with their ears. (3) Dr. Peter Meijer, a scientist at Philips Research Laboratories in the Netherlands, has developed a new system called the vOICe. (4) The three middle letters in vOICe stand for “Oh, I see.” (5) Meijer’s groundbreaking technology it may change the lives of visually impaired people all over the world.

(6) The vOICe system translates visual images from a camera into complex sounds. (7) It then sends through headphones to a person these sounds. (8) The program is based on the theory that people can hear certain sounds and learn to translate them into meaningful mental images. (9) Meijer says that he is counting on the brains’ ability to adapt. (10) “Our assumption here is that the brain is ultimately not interested in the information carrier—here, sound—but only in the information content,” he explains.

(11) To evaluate the new system’s effective, a number of visually impaired people were chosen to test the vOICe. (12) Each tester was given a system, a system consisted of a head-mounted camera, stereo headphones, and a laptop computer. (13) Testers reported that everything in the environment had its own

unique sound. (14) Bright areas were louder than dark areas, and the height of an object or person could be determined by pitch. (15) The vOICe users just had to learn which sound went with which object. (16) The system even came equipped with a color identifier that spoke color names.

(17) Within two weeks most people who experiments with the vOICe system are able to identify objects such as walls and doors. (18) Over time some users have even learned to “watch” television or trace the outlines of buildings as they walk. (19) Meijer thinks that translating will eventually become automatically for many users of the vOICe, bringing a form of vision to them for the very first time.

32 What transition could be added to the beginning of sentence 2?

- F** Consequently,
- G** Naturally,
- H** Meanwhile,
- J** However,

33 What change, if any, should be made in sentence 5?

- A** Delete *it*
- B** Change *lives* to *life's*
- C** Insert a comma after *people*
- D** Make no change

34 What is the most effective way to rewrite the idea in sentence 7?

- F** It then sends these sounds. To a person through headphones.
- G** It then sends them through headphones. These sounds to a person.
- H** It then sends these sounds to a person through headphones.
- J** It then sends these sounds to a person, the sounds travel through headphones.

35 What change, if any, should be made in sentence 9?

- A Change *that* to **this**
- B Change *brains'* to **brain's**
- C Change *adapt* to **adapting**
- D Make no change

36 What change, if any, should be made in sentence 11?

- F Change *effective* to **effectiveness**
- G Delete the comma
- H Change *were chosen* to **was chosen**
- J Make no change

37 What is the most effective way to rewrite sentence 12?

- A Each tester was given a system. Consisting of a head-mounted camera, stereo headphones, and a laptop computer.
- B Each tester, which consisted of a head-mounted camera, stereo headphones, and a laptop computer, was given a system.
- C Each tester was given a system because a system consisted of a head-mounted camera and stereo headphones and a laptop computer.
- D Each tester was given a system that consisted of a head-mounted camera, stereo headphones, and a laptop computer.

38 What change, if any, should be made in sentence 16?

- F Change *equiped* to **equipped**
- G Change *that* to **it**
- H Change *spoke* to **spoken**
- J Make no change

39 What change, if any, should be made in sentence 17?

- A Change *weeks* to **weeks**
- B Change *experiments* to **experiment**
- C Insert a comma after *able*
- D Make no change

40 What change, if any, should be made in sentence 19?

- F Change *automatically* to **automatic**
- G Delete the comma
- H Change *them* to **you**
- J Make no change

41 John wants to add this sentence to the last paragraph (sentences 17–19).

They are also able to identify certain situations, including whether the lights in a room are on or off.

Where is the best place, if any, to insert this sentence?

- A Before sentence 17
- B After sentence 17
- C At the end of the paragraph
- D There is no logical place to insert this sentence.

Nicole wrote this story in response to a class assignment. Read Nicole's paper and think about the corrections and improvements she should make. When you finish reading, answer the questions that follow.



Photo courtesy of © Clive Druett; Papilio/CORBIS.

City Pig

(1) In the dictionary the word *mooch* means “to beg.” (2) That’s how Moochie the potbellied pig got his name. (3) He is a moocher, and people love that about him. (4) From Grandpa Forester to two-year-old Olivia Sánchez. (5) Everyone in the neighborhood enjoys feeding Moochie a carrot or potato. (6) Moochie’s owners, the O’Callahans, have had to put there rotund pet on a diet. (7) Now the sign on Moochie’s fence reads “Vegetables Only.”

(8) The O’Callahan house sits on the corner of 14th and Thompson avenue. (9) Surrounded by a big yard with rows of corn and tomato plants, the home is on a lovely patch of country right in the middle of the city. (10) Each morning Moochie emerges from his shed to greet the day. (11) A shed is a good place to

keep gardening equipment and tools. (12) Like all potbellied pigs, Moochie doesn't oink; he makes a hoarse snorting noise. (13) For seven years he snorted his way to the fence each day, his tiny eyes constantly searching for passersby who might offer him a snack.

(14) But one spring day everything changed: a man named Mike Gorman moved in next door. (15) Gorman loved the boulevards and shops that were a few blocks away, an urban type. (16) He did not love living beside what he called a farm!

(17) "There are zoning laws," he informed Mr. O'Callahan. (18) "Residents cannot raise livestock! (19) I've notified the authorities, so I suggest you relocate your hog.

(20) The neighbors rallied around Moochie. (21) They signed petitions and wrote letters. (22) But laws are laws. (23) Pigs are considered livestock—even pigs that love humans and are loved in return. (24) The O'Callahans had 30 days to find a new one for Moochie.

(25) Time ticked away. (26) Neighbors came to feed Moochie one last time. (27) Some little boys sneaked cookies through the fence. (28) Moochie munched away, unaware of his impending fate.

(29) Then neighbor Tommy Jones had an idea. (30) He had learned that service animals were allowed almost everywhere. (31) He had read about service animals—dogs and monkeys that help the disabled. (32) Why couldn't Moochie be a "service pig"? (33) Grandmother O'Callahan was forgetful, and whenever

her family went out, she often got lonely. (34) Potbellied pigs were smart!

(35) Moochie could become a companion pig a helping hand for Grandmother O'Callahan.

(36) The O'Callahans loved the idea and wrote a proposal to the city.

(37) They began training Moochie and bought him a vest (size extra-large) that read "Service Animal."

(38) City officials seemed glad. (39) They had found a loophole that would let Moochie stay with the O'Callahans. (40) The neighborhood celebrated its victory. (41) Mike Gorman was a good sport about it; he just avoided the O'Callahan yard. (42) He was the only neighbor who didn't appreciate the O'Callahans' little patch of country.

42 What revision, if any, is needed in sentences 4 and 5?

- F From Grandpa Forester to two-year-old Olivia Sánchez, everyone in the neighborhood. Enjoys feeding Moochie a carrot or potato.
- G Everyone in the neighborhood, from Grandpa Forester to two-year-old Olivia Sánchez, enjoys feeding Moochie a carrot or potato.
- H Everyone in the neighborhood who enjoys feeding Moochie a carrot or potato is from Grandpa Forester to two-year-old Olivia Sánchez.
- J No revision is needed.

43 What change, if any, should be made in sentence 6?

- A Change *owners* to *owner's*
- B Insert **they** after the second comma
- C Change *there* to **their**
- D Make no change

44 What change, if any, should be made in sentence 8?

- F Change *sits* to **sitting**
- G Insert a comma after *corner*
- H Change *avenue* to **Avenue**
- J Make no change

45 What is the most effective way to improve the organization of the second paragraph (sentences 8–13)?

- A Delete sentence 9
- B Switch sentences 9 and 10
- C Switch sentences 10 and 11
- D Delete sentence 11

46 What is the most effective way to rewrite the ideas in sentence 15?

- F Gorman, an urban type, loved the boulevards and shops that were a few blocks away.
- G A few blocks away Gorman loved the boulevards and shops, an urban type.
- H Loving the boulevards and shops that were a few blocks away. Gorman was an urban type.
- J Gorman loved the boulevards and shops that were a few blocks away, he was an urban type.

47 What change should be made in sentence 19?

- A Change *notified* to **notified**
- B Delete *so*
- C Change *your* to **you're**
- D Insert quotation marks at the end of the sentence

48 The meaning of sentence 24 can be clarified by changing *one* to —

- F friend
- G law
- H livestock
- J home

49 What change, if any, should be made in sentence 35?

- A Change *become* to **became**
- B Change *companion* to **companion**
- C Insert a comma after *pig*
- D Make no change

50 What is the most effective way to combine sentences 38 and 39?

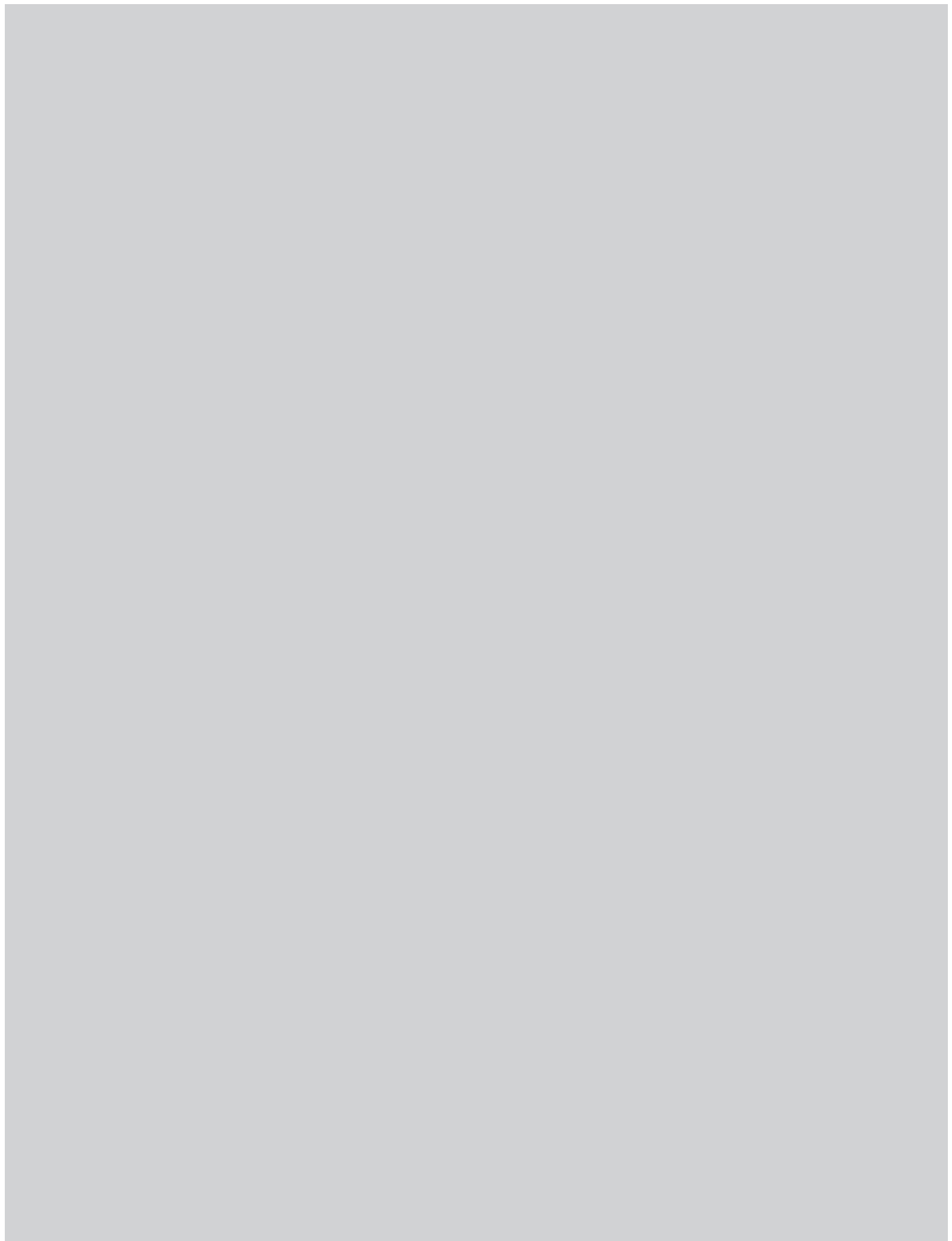
- F City officials seemed glad to have found a loophole that would let Moochie stay with the O'Callahans.
- G City officials seemed glad, they had found a loophole that would let Moochie stay with the O'Callahans.
- H City officials seemed glad, although they had found a loophole that would let Moochie stay with the O'Callahans.
- J City officials seemed glad and to have found a loophole that would let Moochie stay with the O'Callahans.

51 What change, if any, should be made in sentence 42?

- A Insert a comma after *neighbor*
- B Change *apreciate* to **appreciate**
- C Change *O'Callahans'* to **O'Callahans**
- D Make no change

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS
ON THE ANSWER DOCUMENT.





MATHEMATICS

Mathematics Chart

LENGTH

Metric

1 kilometer = 1000 meters

1 meter = 100 centimeters

1 centimeter = 10 millimeters

Customary

1 mile = 1760 yards

1 mile = 5280 feet

1 yard = 3 feet

1 foot = 12 inches

CAPACITY AND VOLUME

Metric

1 liter = 1000 milliliters

Customary

1 gallon = 4 quarts

1 gallon = 128 ounces

1 quart = 2 pints

1 pint = 2 cups

1 cup = 8 ounces

MASS AND WEIGHT

Metric

1 kilogram = 1000 grams

1 gram = 1000 milligrams

Customary

1 ton = 2000 pounds

1 pound = 16 ounces

TIME

1 year = 365 days

1 year = 12 months

1 year = 52 weeks

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

Metric and customary rulers can be found on the separate Mathematics Chart.

Mathematics Chart

Perimeter	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
Circumference	circle	$C = 2\pi r$ or $C = \pi d$
Area	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
	trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	circle	$A = \pi r^2$
Surface Area	cube	$S = 6s^2$
	cylinder (lateral)	$S = 2\pi rh$
	cylinder (total)	$S = 2\pi rh + 2\pi r^2$ or $S = 2\pi r(h + r)$
	cone (lateral)	$S = \pi rl$
	cone (total)	$S = \pi rl + \pi r^2$ or $S = \pi r(l + r)$
	sphere	$S = 4\pi r^2$
Volume	prism or cylinder	$V = Bh^*$
	pyramid or cone	$V = \frac{1}{3}Bh^*$
	sphere	$V = \frac{4}{3}\pi r^3$
<i>*B represents the area of the Base of a solid figure.</i>		
Pi	π	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$
Pythagorean Theorem		$a^2 + b^2 = c^2$
Distance Formula		$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Slope of a Line		$m = \frac{y_2 - y_1}{x_2 - x_1}$
Midpoint Formula		$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$
Quadratic Formula		$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Slope-Intercept Form of an Equation		$y = mx + b$
Point-Slope Form of an Equation		$y - y_1 = m(x - x_1)$
Standard Form of an Equation		$Ax + By = C$
Simple Interest Formula		$I = prt$

DIRECTIONS

Read each question. Then fill in the correct answer on your answer document. If a correct answer is not here, mark the letter for “Not here.”

SAMPLE A

Find the slope of the line $2y = 8x - 3$.

A $-\frac{3}{2}$

B 4

C 8

D Not here

SAMPLE B

Janice uses a rectangular box to store her art supplies. The dimensions of the rectangular box are 22.5 inches by 14 inches by 11.5 inches. What is the volume of this box in cubic inches?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.



- 1 A manufacturing company that makes semiconductors produced about 500 wafers of gallium nitride. The company found that 60 of the wafers contained defects and could not be used. Based on this information, which is the best prediction of the number of defective wafers produced when this company manufactures 8000 wafers?

A 133
B 500
C 960
D 367

- 2 Which of the following functions of the form $y = ax^2$ produces the widest graph and opens upward?

F $y = -\frac{1}{4}x^2$

G $y = \frac{6}{5}x^2$

H $y = -\frac{4}{3}x^2$

J $y = \frac{7}{3}x^2$

- 3 Which table identifies points on the line defined by the equation $y - 5x = -9$?

A

x	y
-5	-34
-2	-19
1	-9
2	11
7	26

B

x	y
-6	-39
-5	-34
1	-14
4	10
7	24

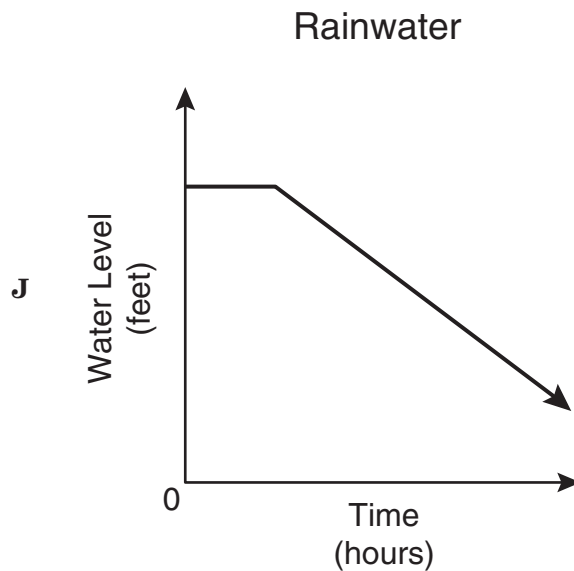
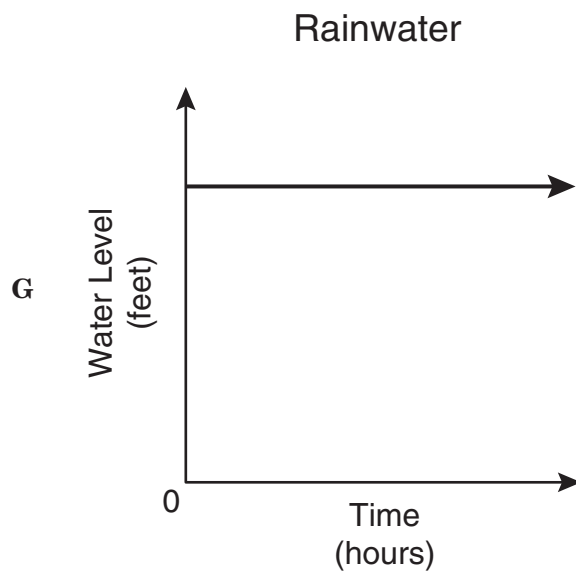
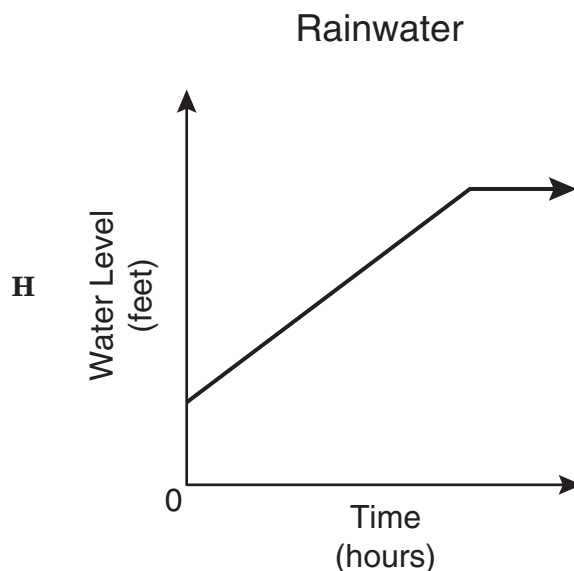
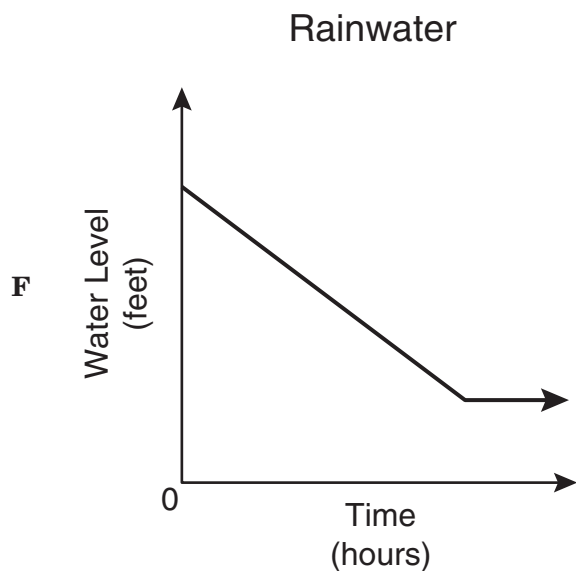
C

x	y
-4	-29
-1	-14
1	-4
3	6
6	21

D

x	y
-7	-44
-3	-23
0	9
4	13
6	21

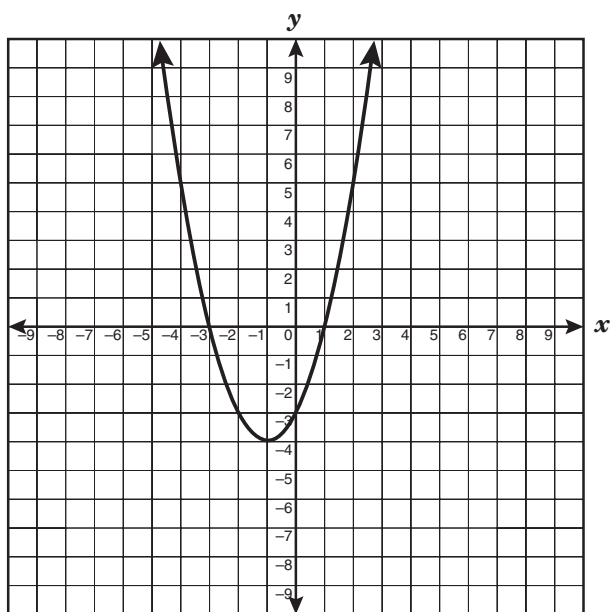
- 4 The water level in a creek was at a maximum height after a heavy rain. The water level in the creek receded at a constant rate for several hours until it leveled off to its regular height. Which of the following graphs best represents this information?



- 5 The ratio of juniors to seniors enrolled in technology classes is 9 to 8. If the total number of juniors and seniors enrolled in these classes is 51, which of these best represents the percent of students enrolled in technology classes who are seniors?

A 27%
 B 24%
 C 53%
 D 47%

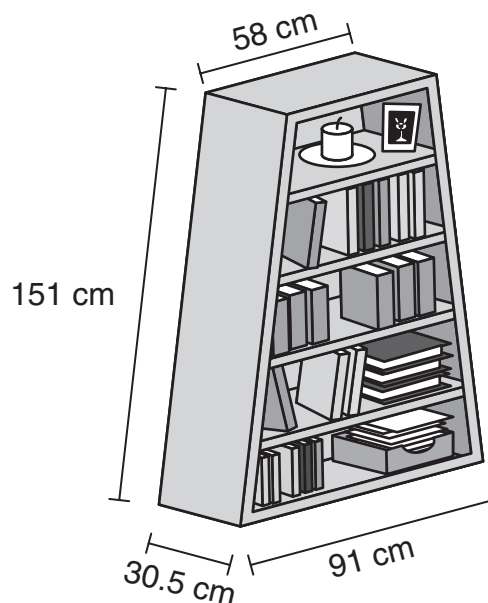
- 6 The graph of the function $y = x^2 + 2x - 3$ is shown below.



What are the y -intercept and x -intercepts of the function?

F $(0, -3), (0, 1), (-3, 0)$
 G $(0, -3), (1, 0), (-3, 0)$
 H $(-3, 0), (1, 0), (-3, 1)$
 J $(1, -3), (0, 1), (0, -3)$

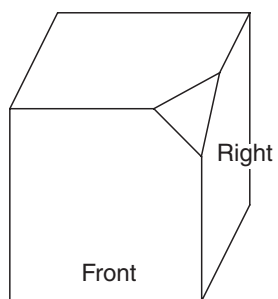
- 7 Mrs. Wong has a bookcase shaped like an isosceles trapezoid. The height of the bookcase is approximately 150 centimeters. The other dimensions are shown below.



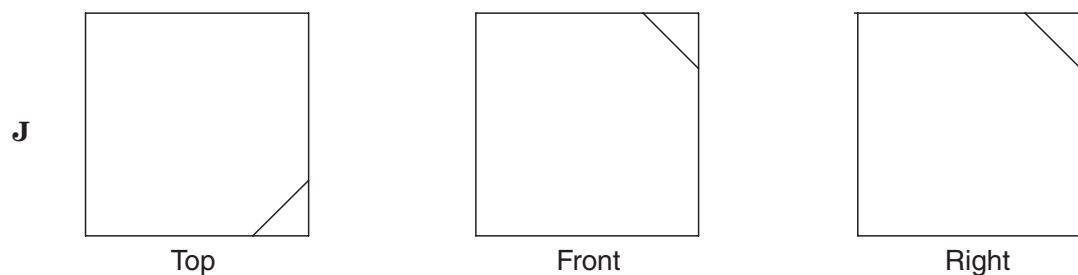
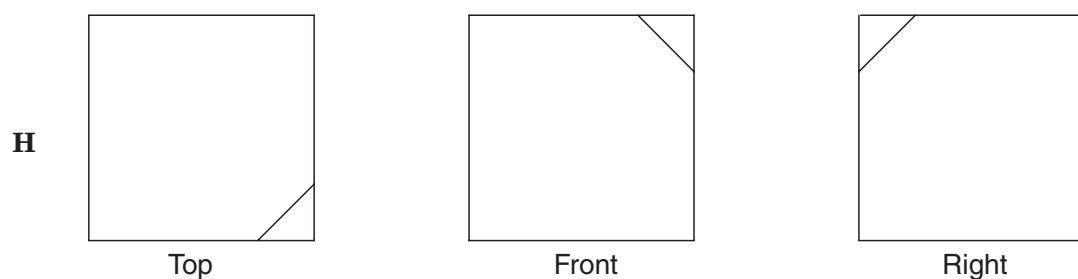
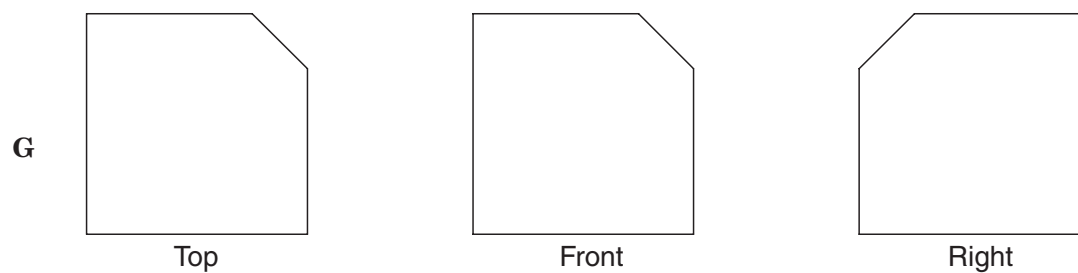
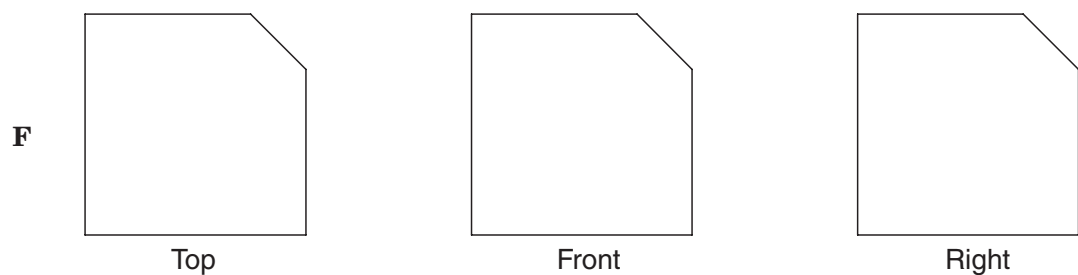
Which of the following is closest to the surface area of the top, left, and right rectangular sides of Mrs. Wong's bookcase?

A $11,000 \text{ cm}^2$
 B $22,000 \text{ cm}^2$
 C $36,000 \text{ cm}^2$
 D $9,000 \text{ cm}^2$

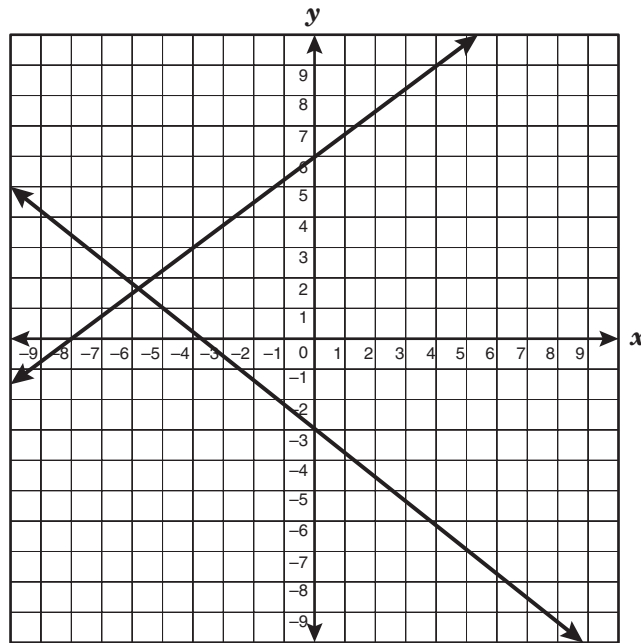
- 8 The figure shown below is a cube with a corner sliced off.



Which of the following sets of 2-dimensional drawings shows the top, front, and right views of the figure above?



- 9 Look at the system of linear equations graphed on the coordinate grid below.



Which of the following is closest to the solution to this system of linear equations?

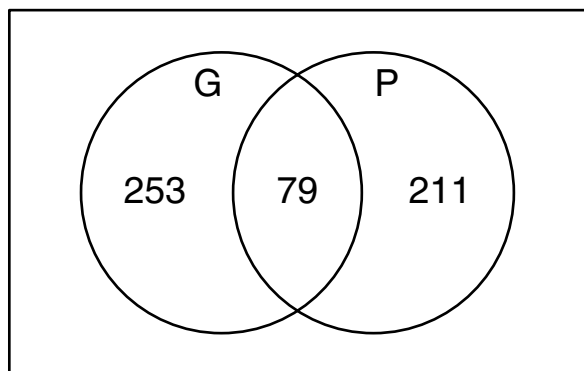
- A $(-5\frac{1}{2}, 2\frac{1}{4})$
- B $(-5\frac{3}{4}, 1\frac{2}{3})$
- C $(-6\frac{1}{4}, 1\frac{3}{4})$
- D $(-5\frac{2}{3}, \frac{3}{4})$

- 10 The pattern below represents the areas of several squares.

1, 9, 25, 49, ...

This pattern was formed by changing the length of the sides of the squares. How does each new length compare to the previous length?

- F** Each new length is 2 units greater.
- G** Each new length is $2\frac{1}{2}$ units greater.
- H** Each new length is 4 units greater.
- J** Each new length is 8 units greater.
- 11 A sports-drink company surveyed 600 athletes to find out if they liked Sports Drink G or Sports Drink P. The diagram shows the results of the survey.



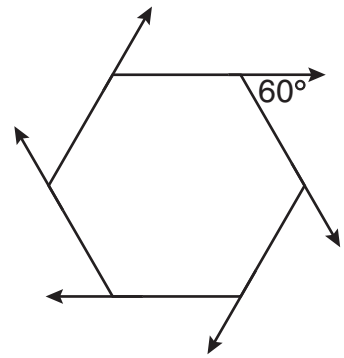
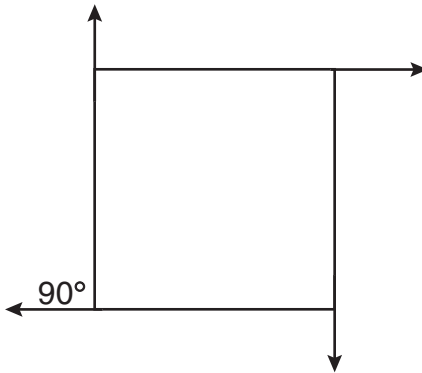
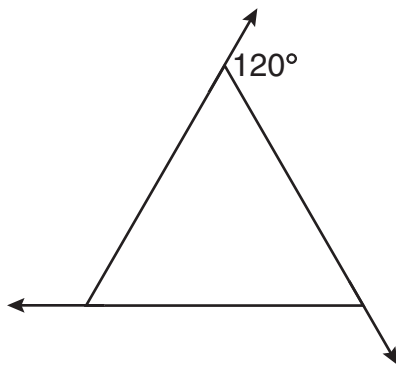
Which expression can be used to determine the number of athletes surveyed who did not like either Sports Drink G or Sports Drink P?

- A** $(253 + 211)$
- B** $(253 + 79 + 211)$
- C** $600 - (253 + 211)$
- D** $600 - (253 + 79 + 211)$

- 12 The total cost, c , of leasing a car can be expressed by the equation $c = 1800 + 185m$, where m is the number of months the car is leased. Which statement is true based on the information given?

- F** The car must be leased for at least 60 months.
- G** The total cost of leasing this car for 1 year is more than \$4000.
- H** The total cost of leasing this car for 2 years is \$4020.
- J** The cost of leasing this car is greater than the cost of buying one.

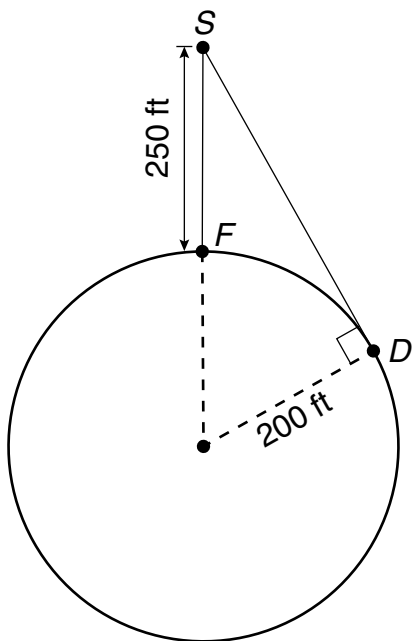
- 13 The measure of an exterior angle is shown for each of 3 regular polygons below.



Which expression best represents the measure in degrees of an exterior angle of a regular polygon with n sides?

- A $30(n + 1)$
- B $\frac{360}{(n - 2)n}$
- C $30(n - 1)$
- D $\frac{360}{n}$
-
- 14 Troy used chalk to outline a triangular plot of land in his backyard. The plot of land has a perimeter of 26 feet, with its longest side measuring 8 feet 10 inches. Troy wants to outline a second triangular plot of land similar to the first but with a perimeter of 42 feet. Which of these is closest to the measure of the longest side of the second triangular plot of land?
- F 17 ft 2 in.
- G 13 ft 1 in.
- H 14 ft 3 in.
- J 17 ft 11 in.
- 15 The Pruitts own a natural-foods store and purchase sacks containing 5 kilograms of flax seed for \$30 each. The Pruitts then package the seed into 50-gram bags. The bags cost \$0.06 each. If these bags of 50 grams of seed sell for \$0.98 per bag, what is the profit on a 5-kilogram sack of flax seed?
- A \$65
- B \$62
- C \$33
- D \$98

- 16 Mr. Krueger attended an event at the Good Time Sports Arena. The arena is in the shape of a circle with a radius of 200 feet. He parked his car in the lot at point S , which is 250 feet away from the entrance at point F .



Mr. Krueger left the arena through the exit at point D and walked a straight-line path to his parked car. About how far away was his parked car from the exit at point D ?

- F** 200 ft
- G** 403 ft
- H** 492 ft
- J** 650 ft

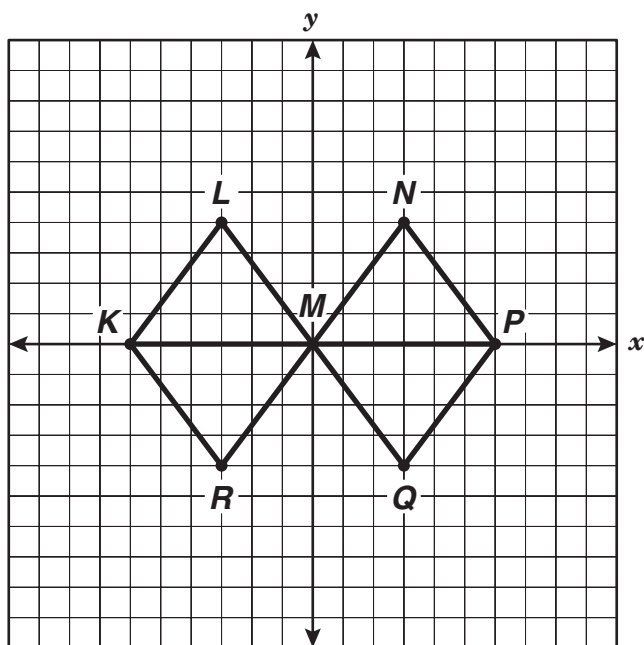
- 17 The midpoint of \overline{AB} is M . If the coordinates of M are $(\frac{1}{2}, -2)$ and the coordinates of B are $(6, 1)$, what are the coordinates of A ?

- A** $(-5, -5)$
- B** $(2, -10)$
- C** $(-3\frac{1}{4}, -1\frac{1}{2})$
- D** $(-5, 5)$

- 18 Which of the following is equivalent to $2x - 3y \geq 9$?

- F** $y \geq \frac{3}{2}x + 3$
- G** $y \leq \frac{2}{3}x - 3$
- H** $y \geq \frac{2}{3}x - 3$
- J** $y \leq \frac{3}{2}x + 3$

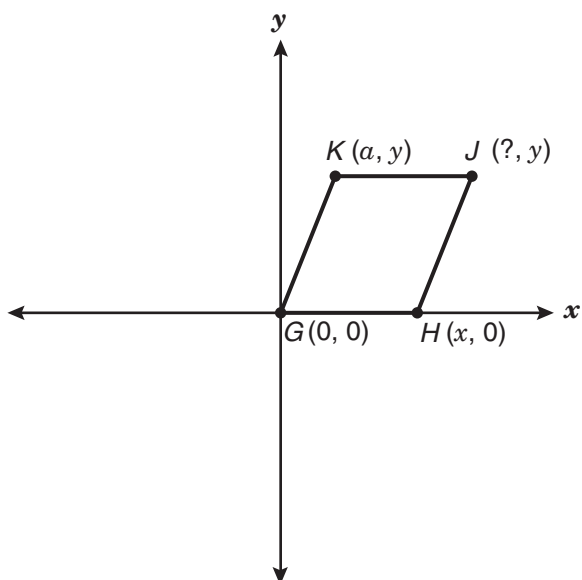
- 19 Look at the triangles graphed on the grid below.



Which of the following correctly describes two triangles, one a single reflection of the other across the x -axis?

- A $\triangle KLM \cong \triangle PNM$
- B $\triangle KRM \cong \triangle PQM$
- C $\triangle KRM \cong \triangle PNM$
- D $\triangle KLM \cong \triangle KRM$

- 20 Parallelogram $GHJK$ is shown below.



Which of the following represents the x -value of point J ?

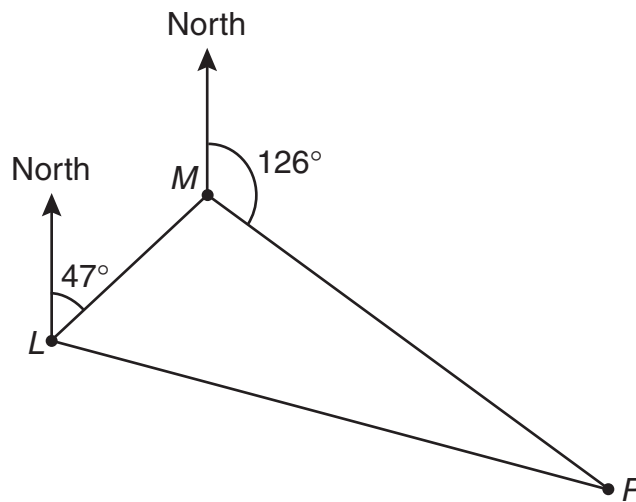
- F** $y - x$
- G** $x + y$
- H** $a + x$
- J** $x - a$

- 21 If y varies directly with x and y is 42 when x is 4, what is the constant of variation expressed in decimal form?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 22 Jupiter has an equatorial diameter of about 8.9×10^4 miles, which is about 11.2 times as great as Earth's equatorial diameter. According to this information, what is Earth's approximate equatorial diameter in scientific notation?
- F** 2.3×10^3 mi
G 9.97×10^5 mi
H 7.95×10^3 mi
J 2.01×10^2 mi
-

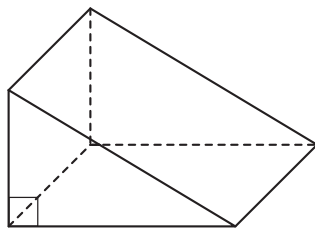
- 23 The figure below shows Aaron's recent hiking course, which started at point L , went to point M and then point P , and then returned to point L .



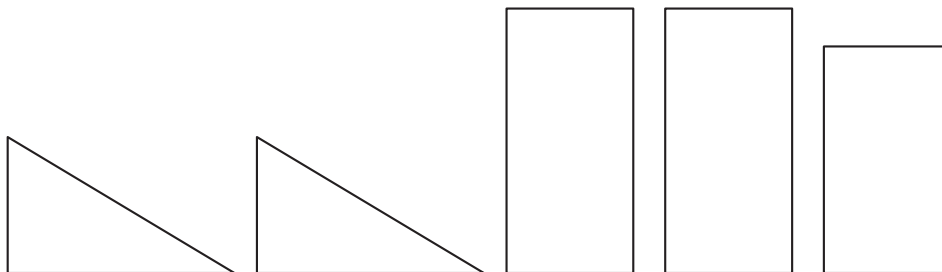
What is the measure of $\angle LMP$ formed by Aaron's hiking course?

- A** 101°
B 79°
C 54°
D 43°

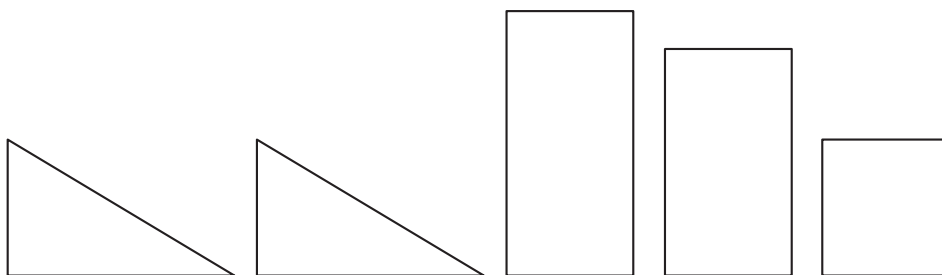
- 24 Which set of figures can be used to construct a representation of the surface area of the triangular prism shown below?



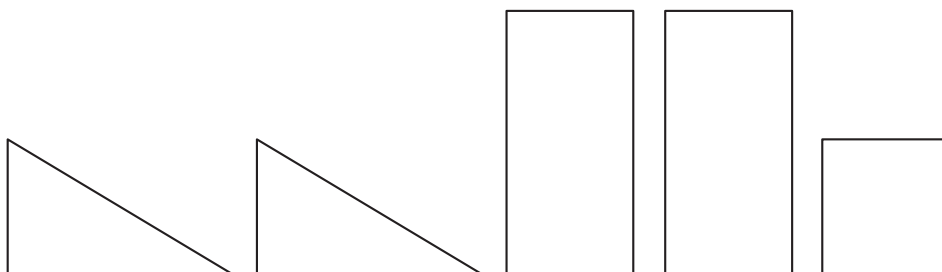
F



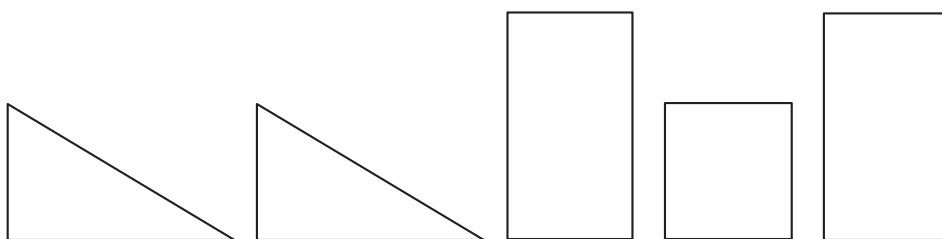
G



H



J



- 25** Winners from the math club's fund-raiser randomly select a gift certificate from Box A and from Box B. The contents of each box are shown below.

Box A	Box B
5 dinner certificates	4 CD certificates
4 DVD certificates	3 camera certificates
3 movie certificates	5 amusement park certificates
5 T-shirt certificates	5 television certificates

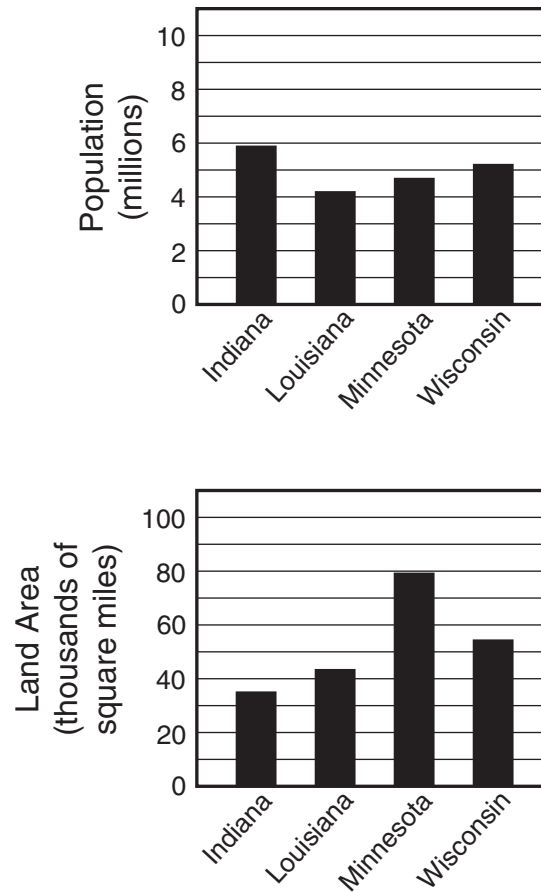
What is the probability that the first winner will randomly select a DVD certificate and an amusement park certificate?

- A** $\frac{20}{289}$
- B** $\frac{9}{17}$
- C** $\frac{9}{289}$
- D** $\frac{1}{19}$

- 26** Which equation describes the line passing through the points (3, 0) and (0, 4)?

- F** $y = 3x + 4$
- G** $x = 4y + 3$
- H** $3x + 4y = 12$
- J** $4x + 3y = 12$

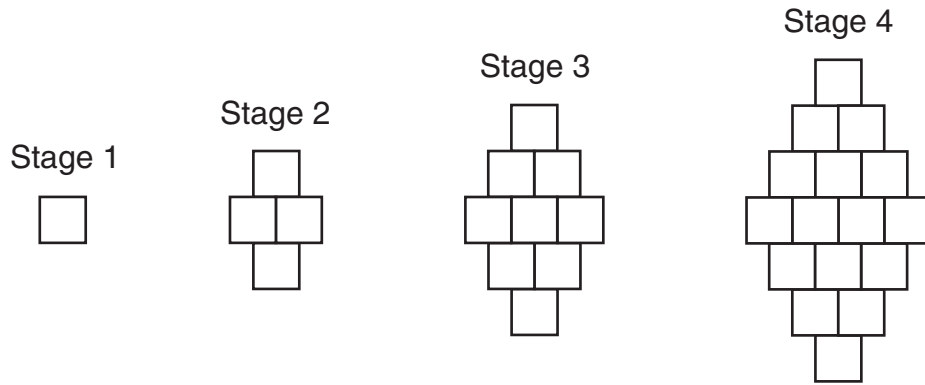
27 The two bar graphs shown below represent the populations and land areas of four states.



Based on the information given in the bar graphs, which of these four states is the least densely populated?

- A Indiana
- B Louisiana
- C Minnesota
- D Wisconsin

- 28 The blocks below are arranged in sequence to show a pattern.



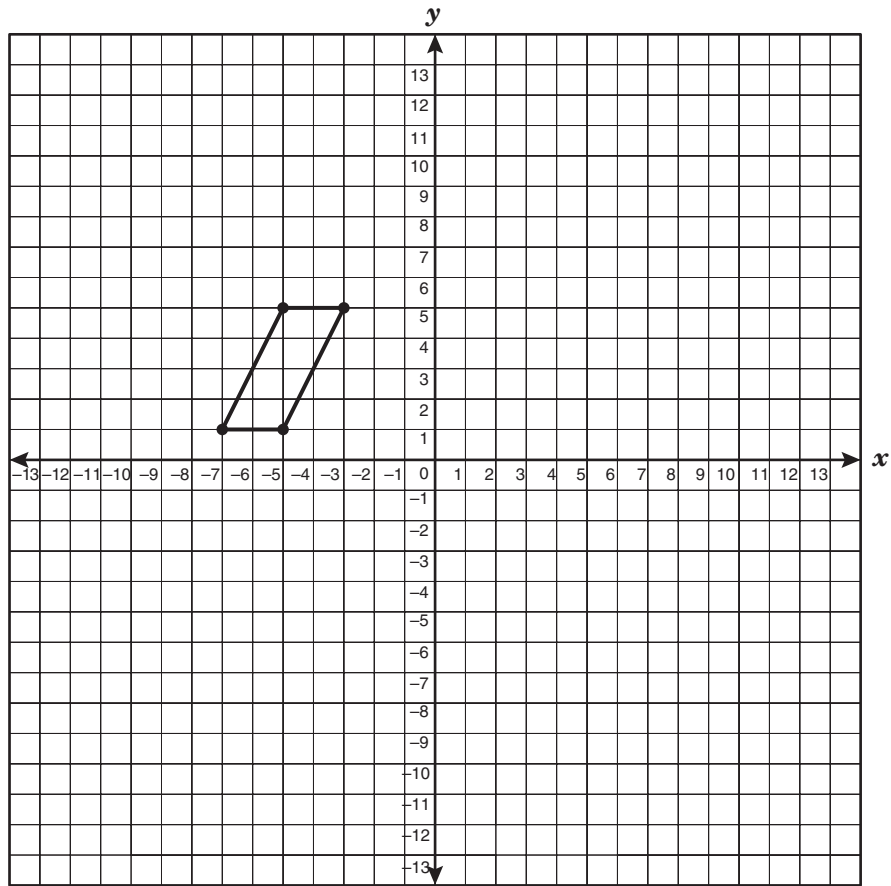
Which expression can be used to determine the number of blocks at Stage n ?

- F** \sqrt{n}
- G** $(n - 1) + 1$
- H** $2n$
- J** n^2

- 29 A ship on the ocean left a dock, traveled 6 miles due north, and then traveled 4 miles due east. Which of the following describes the method for finding the straight-line distance from the ship to the dock?

- A** Use $c = 6$ and $a = 4$ in the equation $c^2 = a^2 + b^2$ and then solve for b
- B** Use $a = 6$ and $b = 4$ in the equation $c^2 = a^2 + b^2$ and then solve for c
- C** Use $a = 6$ and $b = 4$ in the equation $c^2 = a^2 + b^2$, solve for c , and then find $a + b + c$
- D** Use $c = 6$ and $a = 4$ in the equation $c^2 = a^2 + b^2$, solve for b , and then find $a + b + c$

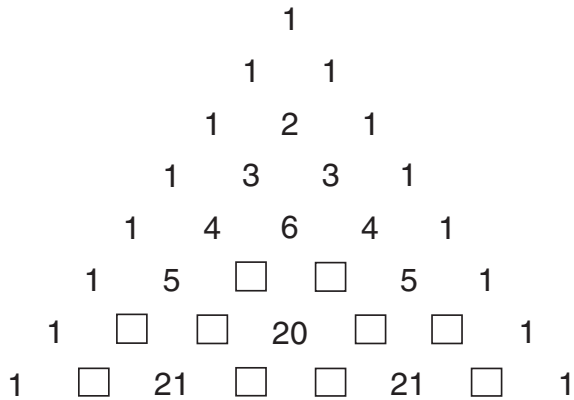
- 30 A parallelogram is graphed on the grid.



Which set of coordinates identifies the vertices of a similar figure?

- F** $(-2, -1), (-4, -1), (-3, -6), (-5, -6)$
G $(0, -2), (0, -5), (8, 1), (8, -2)$
H $(1, 2), (1, 6), (9, 6), (9, 10)$
J $(-1, -1), (0, 3), (2, -1), (3, 3)$

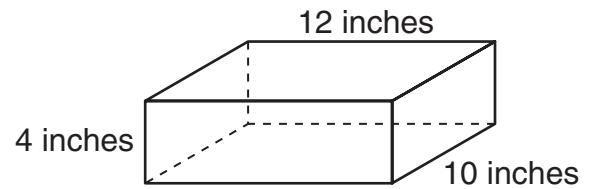
- 31 The figure below shows a partial view of Pascal's triangle.



If each square represents a missing number in Pascal's triangle, which of the following could not be a missing number used to complete the partial view of Pascal's triangle shown above?

- A 24
- B 15
- C 35
- D 10

- 32 What is the volume of a similar rectangular box with dimensions that are 3.5 times larger than the dimensions of the rectangular box shown below?



- F 5,880 in.³
- G 17,836 in.³
- H 20,580 in.³
- J 1,680 in.³

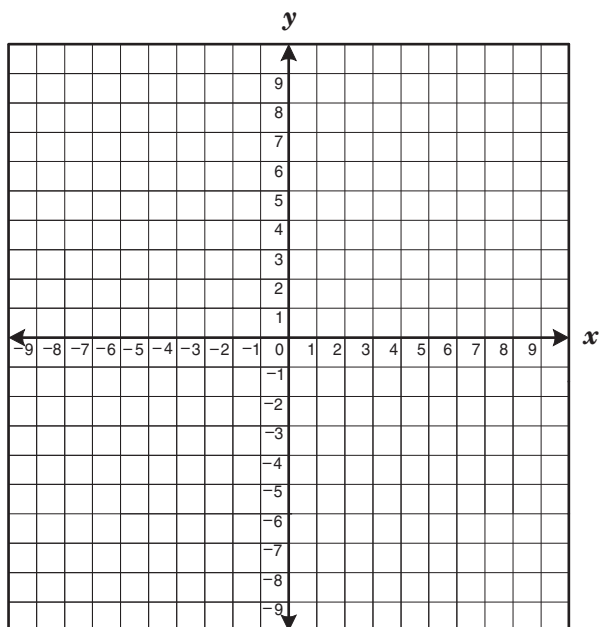
- 33 Points M and N lie on circle P . If circle P has a radius r , which of the following statements cannot be true?

- A $MN > r$
- B $MN > 2r$
- C $MN = r$
- D $MN = 2r$

- 34 Maricella has a bag containing 35 nickels and quarters. The total value of these coins is less than \$2.50. What is the maximum number of quarters that meets these conditions?

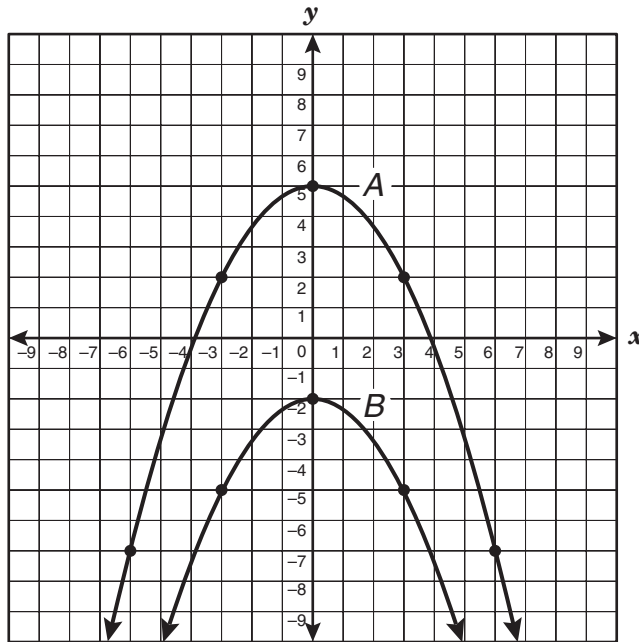
F 10
G 4
H 3
J 9

- 35 A right triangle has two vertices with coordinates $(0, 3)$ and $(4, 1)$. Which coordinate could be a third vertex of this right triangle?



- A** $(2, 2)$
B $(4, 4)$
C $(6, 5)$
D $(8, -1)$

- 36 The grid below shows parabolas A and B of the form $y = ax^2 + c$.



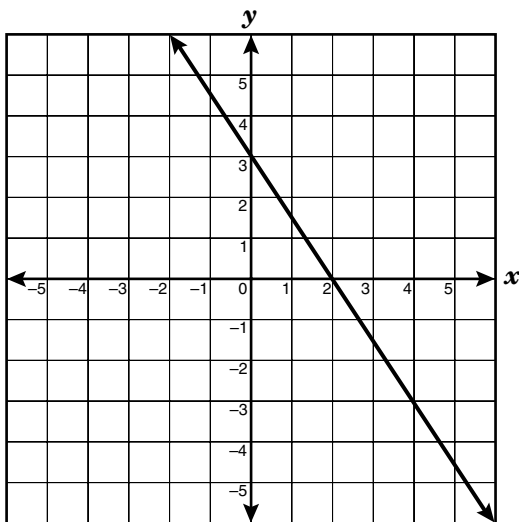
How are parabolas A and B related?

- F** Parabola A is narrower than parabola B .
- G** Parabola A is wider than parabola B .
- H** All the points on parabola A are 7 units below the corresponding points on parabola B .
- J** All the points on parabola A are 7 units above the corresponding points on parabola B .
-
- 37 If \overline{JM} is a base and \overline{LM} is a side of isosceles trapezoid $JKLM$, then which statement must be true?
- A** \overline{JM} and \overline{KL} are parallel.
- B** \overline{LM} and \overline{JK} are parallel.
- C** \overline{JM} and \overline{KL} are perpendicular.
- D** \overline{LM} and \overline{JM} are perpendicular.
- 38 In $\triangle PKN$, $PN = 14$ inches, $m\angle N = 30^\circ$, and $m\angle K = 90^\circ$. Which is closest to the perimeter of $\triangle PKN$?
- F** 42 in.
- G** 33 in.
- H** 31 in.
- J** 28 in.

- 39 Hoaung went to a doughnut shop where jelly-filled doughnuts cost \$0.50 including tax and glazed doughnuts cost \$0.30 including tax. If Hoaung has \$2 to spend and wants to purchase at least one of each of these two kinds of doughnuts, which of the following does not represent a reasonable combination of doughnuts that he could purchase?

- A 2 jelly-filled doughnuts and 2 glazed doughnuts
- B 2 jelly-filled doughnuts and 3 glazed doughnuts
- C 3 jelly-filled doughnuts and 2 glazed doughnuts
- D 1 jelly-filled doughnut and 5 glazed doughnuts

- 40 Which equation best represents the graph below?

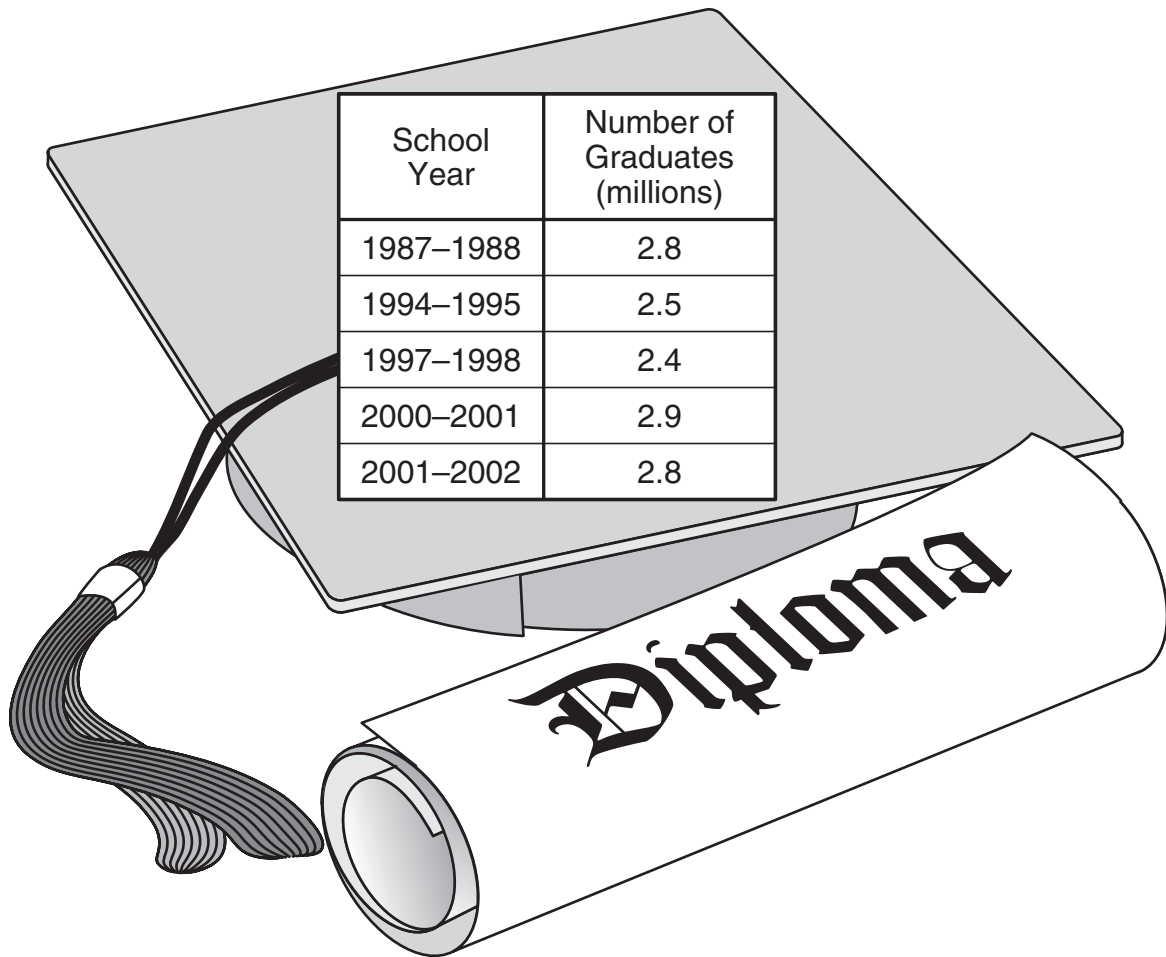


- F $y = 3 - \frac{3}{2}x$
- G $y = 3 - \frac{2}{3}x$
- H $y = 3 + \frac{2}{3}x$
- J $y = 3 + \frac{3}{2}x$

- 41 Kimberly and Pam ran a 1-mile race. If k represents the number of seconds Kimberly took to finish the race and p represents the number of seconds Pam took to finish the race, which of the following describes a situation in which Kimberly finished the race before Pam?

- A $k \geq p$
- B $k \leq p$
- C $k > p$
- D $k < p$

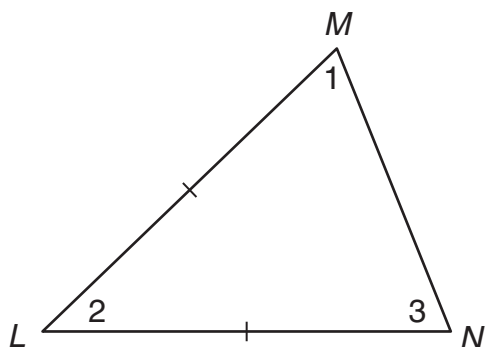
- 42 The table below shows selected school years and the number of high school graduates in millions.



Which statement below is best supported by the data in the table?

- F** The percent increase of high school graduates from the 1987–1988 school year to the 1994–1995 school year was close to 12%.
- G** More students graduated from public high schools than private schools during the 2000–2001 school year.
- H** One million more students graduated from high school during the 2000–2001 school year than graduated during the 2001–2002 school year.
- J** The percent increase of high school graduates from the 1997–1998 school year to the 2000–2001 school year was close to 21%.

- 43 Shown below is $\triangle LMN$, an isosceles triangle.



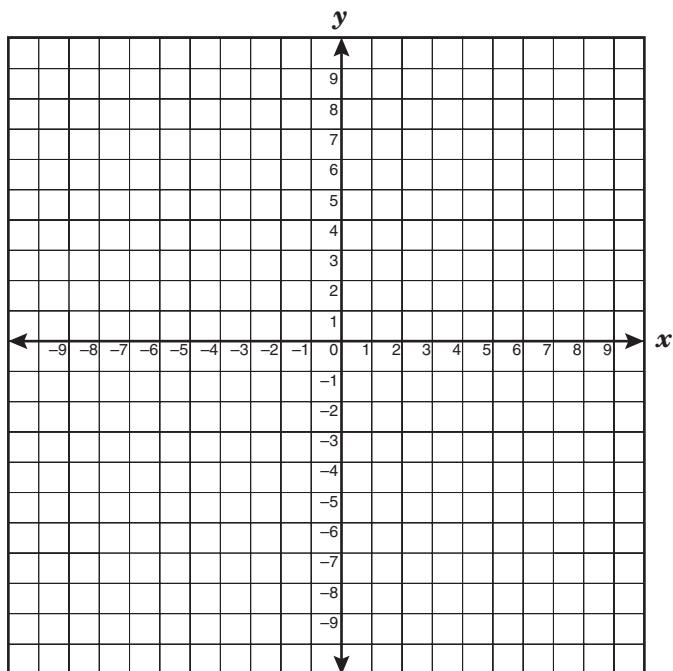
Which equation can be used to find the measure of the vertex angle of this isosceles triangle?

- A $m\angle 1 = 180^\circ - (m\angle 2 - m\angle 3)$
- B $m\angle 2 = 180^\circ - (m\angle 1 + m\angle 3)$
- C $m\angle 3 = 180^\circ + m\angle 1 - m\angle 2$
- D $180^\circ = m\angle 1 - m\angle 2 + m\angle 3$

- 44 Which of the following sets does not represent a function?

- F $\{(-1, -1), (1, 1), (2, 2), (3, 3), (4, 4)\}$
- G $\{(-1, 0), (0, 2), (1, 4), (2, 6), (3, 8)\}$
- H $\{(-1, 2), (1, 1), (1, -1), (2, 1), (4, 2)\}$
- J $\{(-2, 4), (-1, 1), (1, 1), (2, 4), (3, 9)\}$

- 45 Use the grid to graph $y \geq \frac{3}{4}x - 2$.



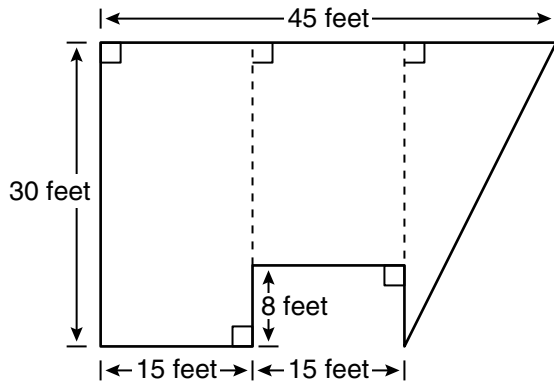
Which coordinate point represents a solution of this inequality?

- A (4, 0)
- B (-3, -5)
- C (7, 2)
- D (-2, 3)

-
- 46 Chanté bought a package of 36 tickets for carnival rides. Each ride requires 4 tickets per person. Which linear function, if any, represents the relationship between x , the number of carnival rides Chanté went on, and y , the number of tickets remaining?

- F $y = 4x - 36$
- G $y = 4(x - 36)$
- H $y = 36 - 4x$
- J No linear function exists.

- 47 Linda has divided her garden into 3 parts, as shown below.

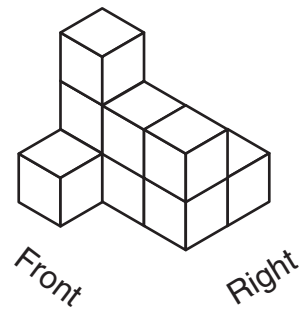


What is the area of her garden?

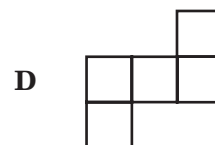
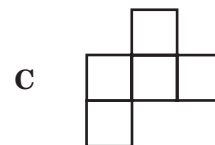
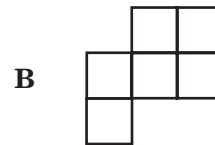
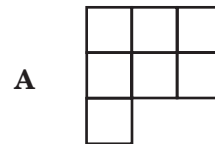
- A 1005 ft²
 B 1230 ft²
 C 1350 ft²
 D 1470 ft²
- 48 The wheels on Lee's bike each have a circumference of approximately 7 feet. Which of the following equations could be used to determine y , the total distance traveled in feet for each wheel as a function of x , the number of wheel revolutions?

- F $y = \frac{7}{x}$
 G $y = 7 + x$
 H $y = 7x$
 J $y = 7 - x$

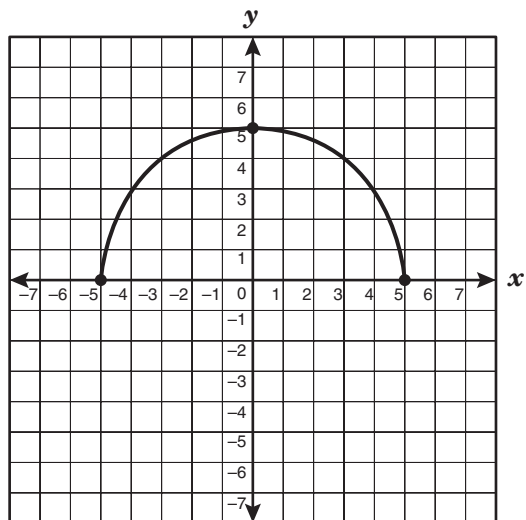
- 49 The 3-dimensional figure shown below represents a structure that Corina built with 9 cubes.



Which of the following best represents the top view of Corina's 9-cube structure?



- 50 The graph of the function $y = \sqrt{25 - x^2}$ is shown on the coordinate grid below.



What is the domain of the function?

- F** $x \leq 5$
- G** $x \geq -5$
- H** $-5 \leq x \leq 5$
- J** $0 \leq x \leq 5$

- 51** A school district held a meeting for all its physical education teachers. The number of women attending was 5 more than twice the number of men attending. A total of 53 teachers attended the meeting. Which system of equations could be used to find w , the number of women, and m , the number of men, at this meeting?

A $m = 2w + 5$
 $w + m = 53$

B $2w + m = 5$
 $w + m = 53$

C $w = m + 5$
 $w + m = 53$

D $w = 2m + 5$
 $w + m = 53$

- 52** What is the slope of the function $-6x - 2y = 8$?

F $\frac{1}{3}$

G -3

H -4

J 3

- 53** A physicist determines the kinetic energy of a moving particle by multiplying one-half the particle's mass, m , by the square of the particle's velocity, v . The kinetic energy is best represented by —

A $\frac{mv^2}{2}$

B $2mv^2$

C $\frac{(mv)^2}{2}$

D $\frac{mv}{2}$

- 54 Mrs. Farmer asked her students to vote for their favorite vegetable. The number of votes each vegetable received is listed below.

- Beets received 17 votes.
- Carrots received 21 votes.
- Lettuce received 21 votes.
- Broccoli received 19 votes.
- Potatoes received 22 votes.

If a circle graph is constructed using these data, which of the following tables best represents the central angle of each sector?

F Students' Favorite Vegetable

Vegetable	Central Angle
Beets	17°
Carrots	21°
Lettuce	21°
Broccoli	19°
Potatoes	22°

H Students' Favorite Vegetable

Vegetable	Central Angle
Beets	61°
Carrots	76°
Lettuce	76°
Broccoli	68°
Potatoes	79°

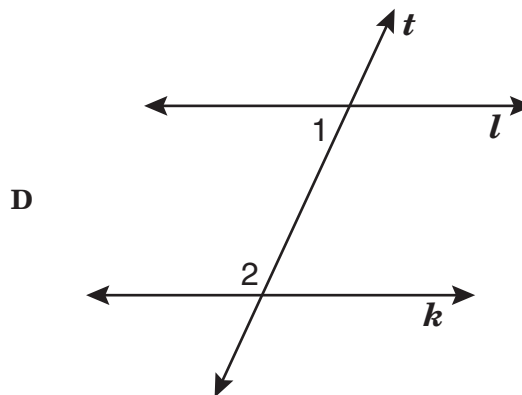
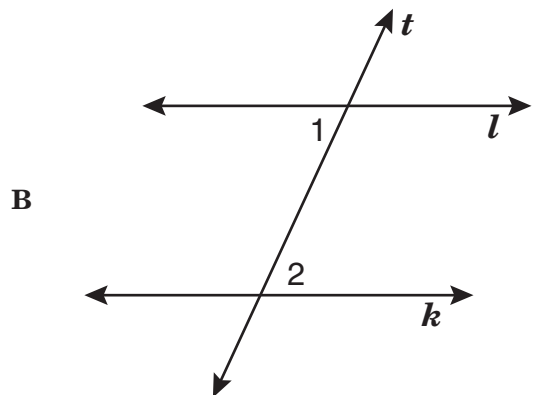
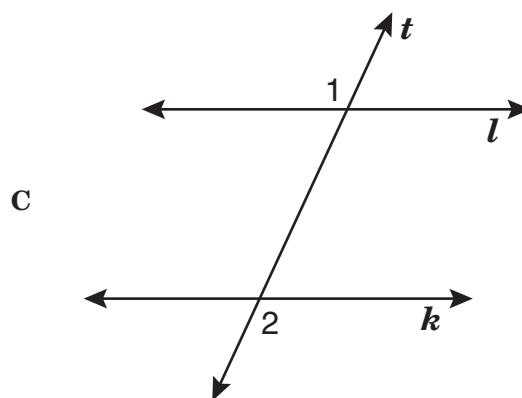
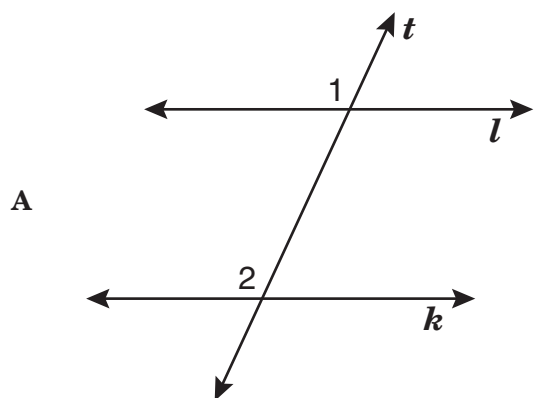
G Students' Favorite Vegetable

Vegetable	Central Angle
Beets	61°
Carrots	76°
Lettuce	76°
Broccoli	79°
Potatoes	68°

J Students' Favorite Vegetable

Vegetable	Central Angle
Beets	68°
Carrots	76°
Lettuce	76°
Broccoli	61°
Potatoes	79°

- 55 Mitch drew lines l , k , and t . Lines l and k were parallel to each other. Mitch measured 2 alternate interior angles. He labeled the angles 1 and 2. Which of the following shows angles 1 and 2 correctly labeled?



- 56 A building-trades class built a circular spinner for the school carnival. The spinner has a diameter of 48 inches and is divided into 12 congruent sectors. What is the approximate area of each of the sectors on this spinner?

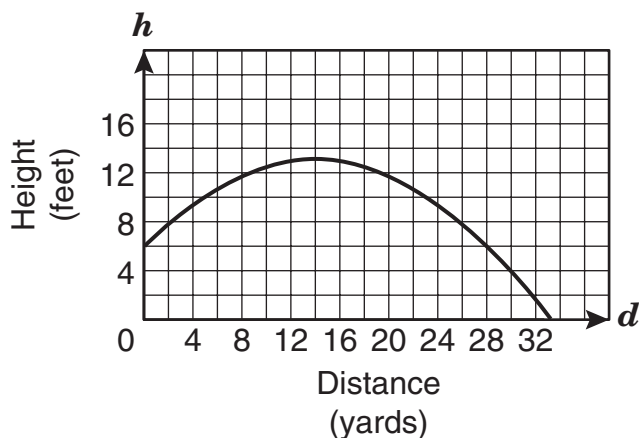
- F** 603 in.²
G 151 in.²
H 25 in.²
J 13 in.²

- 57 Which of the following equations best represents the relationship in the set of data shown below?

x	-4	-3	-1	2	4
y	24	17	9	12	24

- A $y = -7x - 4$
- B $y = \frac{3}{2}x^2$
- C $y = -5x + 4$
- D $y = x^2 + 8$
- 58 Jesse had a collection of baseball cards. He gave 10 cards to his little brother and equally divided the remaining cards among himself and 3 of his friends. He then had 15 cards. How many baseball cards did Jesse originally have in his collection?
- F 20
- G 50
- H 70
- J 100

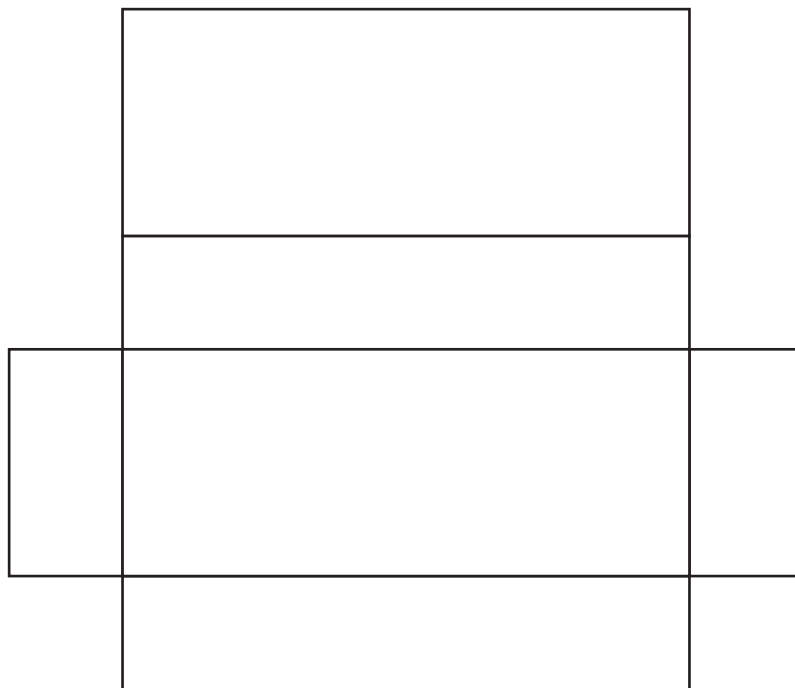
- 59 The graph represents the relationship between the height of a ball and the distance it traveled after the ball was thrown.



What conclusion can be drawn from the graph about this relationship?

- A The ball reached a maximum height of about 16 feet after traveling a horizontal distance of approximately 33 yards.
- B The ball reached a maximum height of about 13 feet after traveling a horizontal distance of approximately 14 yards.
- C The ball was thrown from a height of approximately 6 feet above the ground and traveled a horizontal distance of approximately 20 yards before it reached its maximum height.
- D The ball was thrown from a height of approximately 7 feet above the ground and traveled a horizontal distance of approximately 10 yards before it reached its maximum height.

- 60** Use the ruler on the Mathematics Chart to measure the dimensions of the net of the rectangular prism shown below to the nearest tenth of a centimeter.

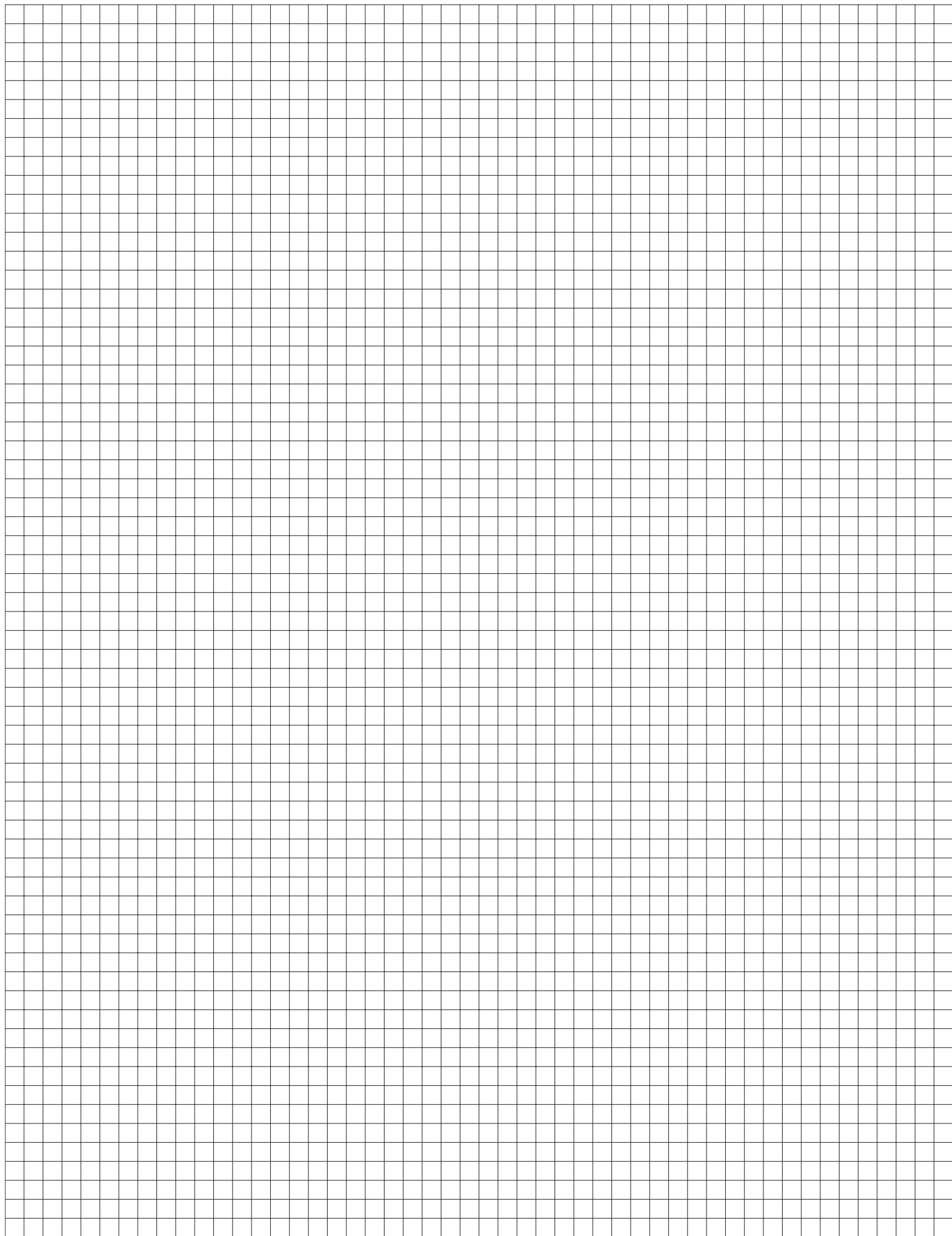


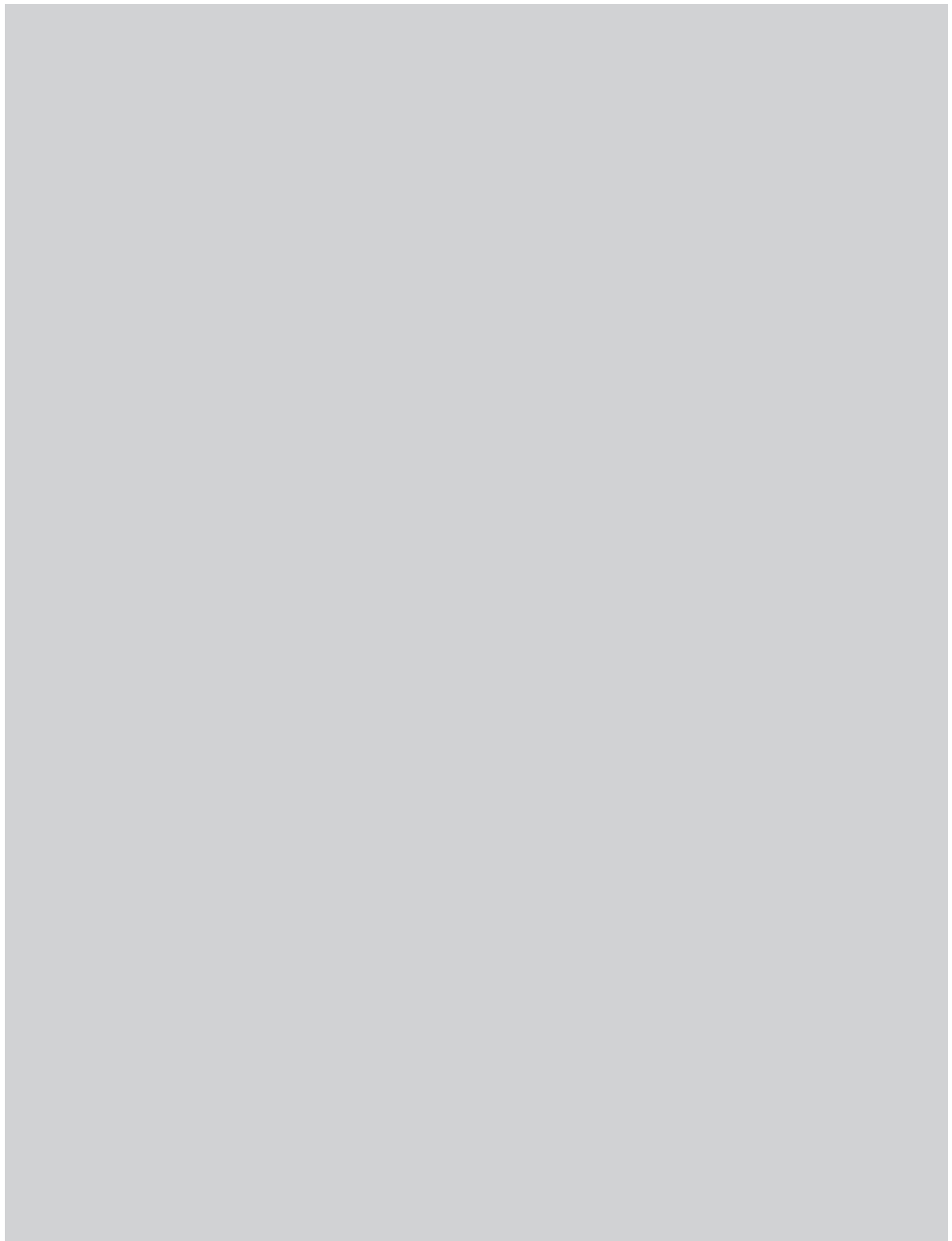
Which of the following best represents the dimensions of the rectangular prism?

- F** 7.5 cm by 1.5 cm by 3.0 cm
- G** 10.5 cm by 1.5 cm by 9.0 cm
- H** 10.5 cm by 3.0 cm by 9.0 cm
- J** 7.5 cm by 3.0 cm by 3.0 cm

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS
ON THE ANSWER DOCUMENT.







SCIENCE

FORMULA CHART

Density = $\frac{\text{mass}}{\text{volume}}$	$D = \frac{m}{v}$
$\left(\begin{array}{c} \text{heat gained} \\ \text{or lost} \end{array} \right) = \left(\begin{array}{c} \text{mass in} \\ \text{grams} \end{array} \right) \left(\begin{array}{c} \text{change in} \\ \text{temperature} \end{array} \right) \left(\begin{array}{c} \text{specific} \\ \text{heat} \end{array} \right)$	$Q = (m)(\Delta T)(C_p)$
Speed = $\frac{\text{distance traveled}}{\text{time}}$	$v = \frac{d}{t}$
Acceleration = $\frac{\text{final velocity} - \text{initial velocity}}{\text{change in time}}$	$a = \frac{v_f - v_i}{\Delta t}$
Momentum = mass \times velocity	$p = mv$
Force = mass \times acceleration	$F = ma$
Work = force \times distance	$W = Fd$
Power = $\frac{\text{work}}{\text{time}}$	$P = \frac{W}{t}$
% efficiency = $\frac{\text{work output}}{\text{work input}} \times 100$	$\% = \frac{W_o}{W_i} \times 100$
Kinetic energy = $\frac{1}{2} (\text{mass} \times \text{velocity}^2)$	$KE = \frac{mv^2}{2}$
Gravitational potential energy = mass \times acceleration due to gravity \times height	$PE = mgh$
Energy = mass \times (speed of light) ²	$E = mc^2$
Velocity of a wave = frequency \times wavelength	$v = f\lambda$
Current = $\frac{\text{voltage}}{\text{resistance}}$	$I = \frac{V}{R}$
Electrical power = voltage \times current	$P = VI$
Electrical energy = power \times time	$E = Pt$

Constants/Conversions		
g = acceleration due to gravity = 9.8 m/s ²		
c = speed of light = 3×10^8 m/s		
speed of sound = 343 m/s at sea level and 20°C		
1 cm ³ = 1 mL		
1 wave cycle/second = 1 hertz (Hz)		
1 calorie (cal) = 4.18 joules		
1000 calories (cal) = 1 Calorie (Cal) = 1 kilocalorie (kcal)		
newton (N) = kgm/s ²		
joule (J) = Nm		
watt (W) = J/s = Nm/s		
volt (V)	ampere (A)	ohm (Ω)

Atomic number	14
Symbol	Si
Atomic mass	28.086
Silicon	

Lanthanide Series

DIRECTIONS

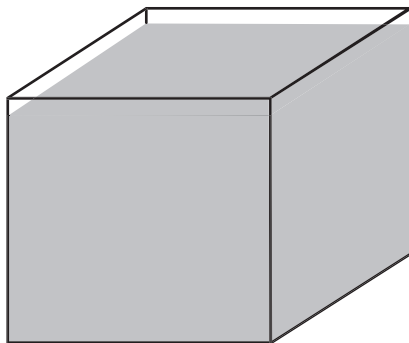
Read each question and choose the best answer. Then fill in the correct answer on your answer document.

SAMPLE A

When a 10% hydrochloric acid solution is heated in an open test tube, the test tube should always be pointed —

- A** so bubbles are visible
- B** at a 180° angle from the flame
- C** toward a ventilated area
- D** away from nearby people

SAMPLE B



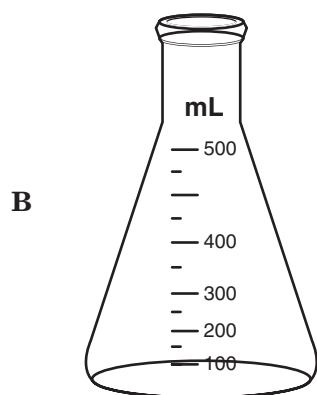
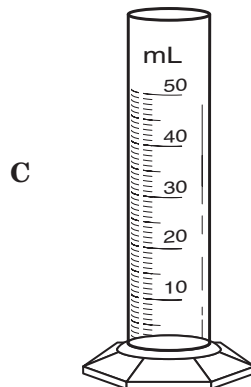
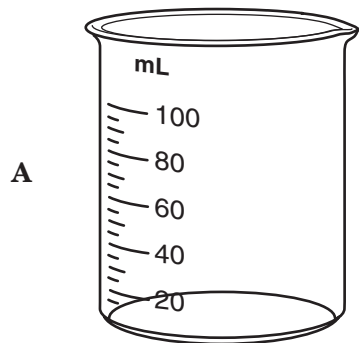
Mass = 40 g

Volume = 20 mL

The picture shows a cube that contains 20 mL of a solution. The solution has a mass of 40 grams. What is the density in g/mL of this solution? Record and bubble in your answer on the answer document.

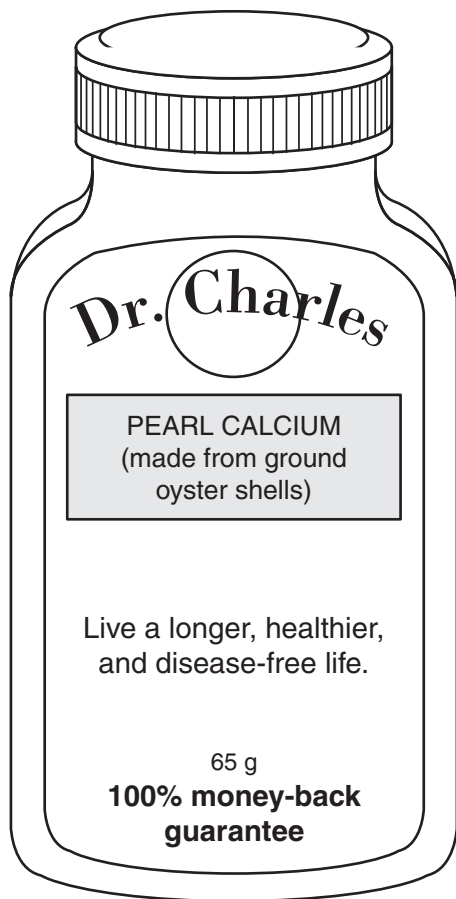


- 1 Which piece of equipment should be used to precisely measure 40.0 mL of a dilute sodium hydroxide solution?



- 2 One economic benefit of using rechargeable batteries instead of disposable batteries is that rechargeable batteries —

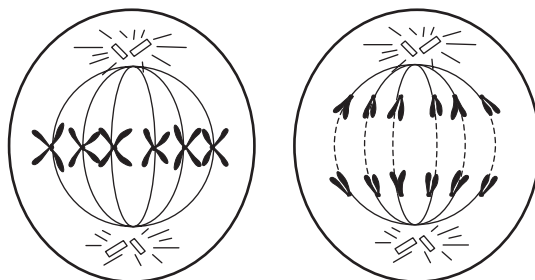
- F are cheaper to manufacture
- G can be packaged in small containers
- H can be used many times
- J generate their own electricity



- 3 Which of these would provide the best scientific support for the information on the label?
- A Data that indicate the gender and average age of consumers
 - B A survey showing that many people prefer pearl calcium
 - C Records that show few requests for money back
 - D A controlled study showing the effectiveness of pearl calcium

- 4 Cows and other ruminants are herbivorous animals. Their diet includes cellulose, which must be fermented before it can be digested. Which of these aid in the fermentation of cellulose in a cow's digestive system?

- F Bacteria
- G Fungi
- H Algae
- J Viruses



- 5 The diagram above shows chromosomes in a cell undergoing cell division. If one of the chromosomes breaks during this process, which of the following will most likely happen?
- A Mutation
 - B Selection
 - C Duplication
 - D Segregation

Masses of Reactants and Products

Trial	Reactant 1 Mass (g)	Reactant 2 Mass (g)	Product Mass (g)
1	32	24	8
2	32	24	55
3	32	24	66
4	32	24	28

- 6 The chart shows the results of a conservation-of-mass experiment. The most accurate trial for this experiment was —

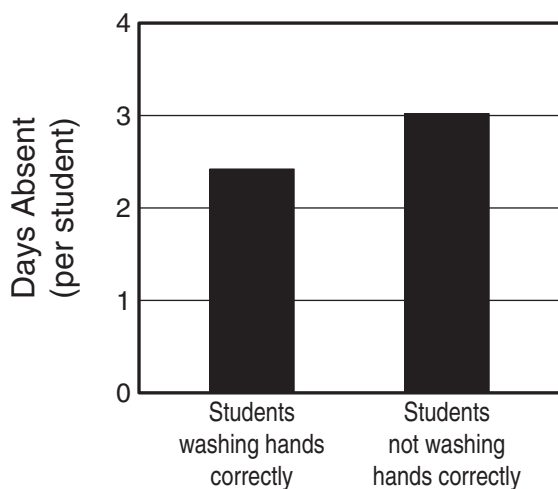
F Trial 1

G Trial 2

H Trial 3

J Trial 4

Hand-Washing Habits
and Absenteeism Among
Elementary School Students

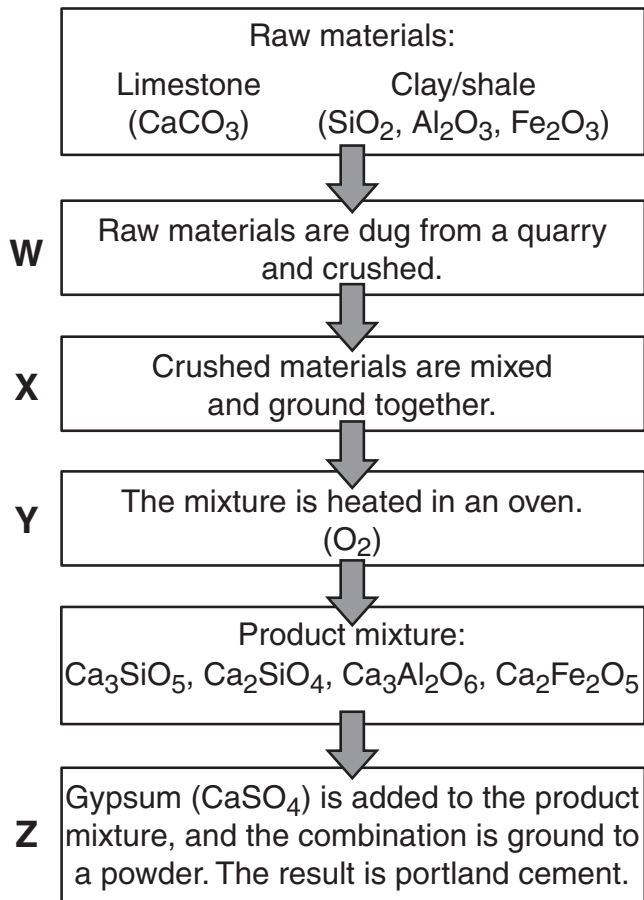


- 7 The graph compares absenteeism of elementary school students who wash their hands properly with absenteeism of students who fail to wash their hands properly. Which inference could best be supported by these data?
- A Proper hand-washing may increase attendance among elementary school students.
 - B Older students have developed better hand-washing habits than younger students.
 - C Some elementary school classes teach correct hand-washing methods to students.
 - D Improper hand-washing is a common practice among most elementary school students.



- 8 The model above shows how an unidentified element, X, forms covalent bonds with oxygen. In which group on the periodic table does Element X most likely belong?
- F Group 6
 - G Group 12
 - H Group 14
 - J Group 18

How Portland Cement Is Made

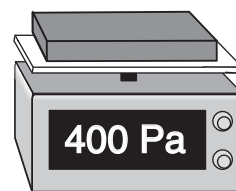
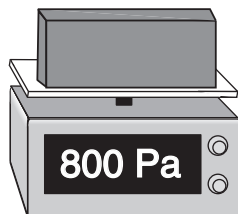
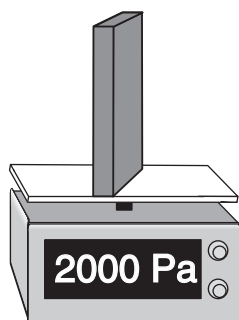


- 9 Portland cement is used to make concrete, a very common construction material. Which step in the production of portland cement causes a chemical change?

A W
B X
C Y
D Z

- 10 Which of these events is most likely to cause a widespread influenza outbreak?

F People in northern regions are affected by weather patterns.
G The influenza virus is recognized by host immune systems.
H Global warming causes increased winter precipitation.
J People lack immunity to a new strain of flu virus.



- 11 The pictures show a 10-newton block of wood being used to demonstrate how this instrument measures pressure. According to these data, the pressure of the block is a measure of the block's —
- A weight distributed over an area
 - B density along each face
 - C mass per unit of volume
 - D change in inertia

Use the information below and your knowledge of science to answer questions 12–14.

Gas Sylvestre

Early alchemists were able to produce various kinds of gases by mixing different substances together. However, it was not until the early 1600s that a Belgian physician, J. B. van Helmont, first used the term *gas*.

Van Helmont concentrated his study on a gas he obtained from the burning of wood. He called this substance *gas sylvestre*, which means “gas from wood.” He demonstrated that *gas sylvestre* also formed when limestone reacted with an acid solution. Van Helmont determined that the gas was denser than air and occurred naturally in the lower chambers of the Grotto del Cane, a cave in Italy. He noticed that the atmosphere in the lower cave did not support animal life. He also observed that the process of fermentation produced *gas sylvestre*. Today *gas sylvestre* is known by a more familiar name—carbon dioxide.

Properties of Some Gases

Gas	Hydrogen	Oxygen	Carbon Dioxide	Chlorine
Molecular Mass (amu)	2	32	44	71
Density (g/L; at 0C)	0.09	1.43	1.98	3.21
Boiling Point (C)	–253	–183	–78*	–35
Solubility in Water (L/L H ₂ O; at 20C)	0.02	0.03	0.88	2.30

* Sublimes (changes directly from solid into gas)

12 Which of these statements is best supported by the information in the table?

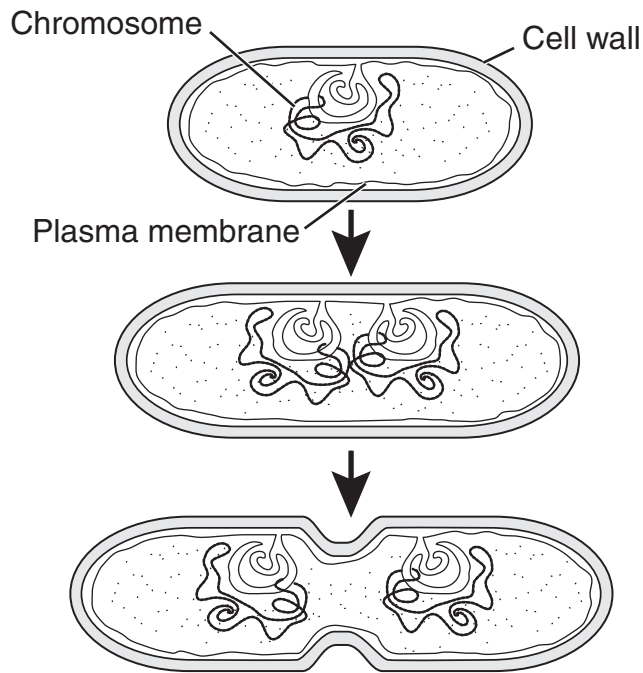
- F** Carbon dioxide and oxygen have similar chemical properties.
- G** The density of the gases increases as their molecular mass increases.
- H** Chlorine and hydrogen boil at the same temperature.
- J** The solubility of the gases decreases as their density increases.

13 Electric power plants that burn fossil fuels generate billions of tons of carbon dioxide and other gases. How might replacing these power plants with solar cells affect the environment?

- A** The amount of water vapor in the atmosphere might increase.
- B** Less land might be needed to produce the same amount of electricity.
- C** Forest fires resulting from highly flammable emissions might be avoided.
- D** The amount of released gases that trap atmospheric heat might be reduced.

14 Which of the following describes a chemical change that J. B. van Helmont could have observed?

- F** Limestone combined with an acid produces a gas.
- G** Solid carbon dioxide becomes a gas at room temperature.
- H** Limestone combined with sand results in a mixture.
- J** Diluting an acid with water produces a solution.



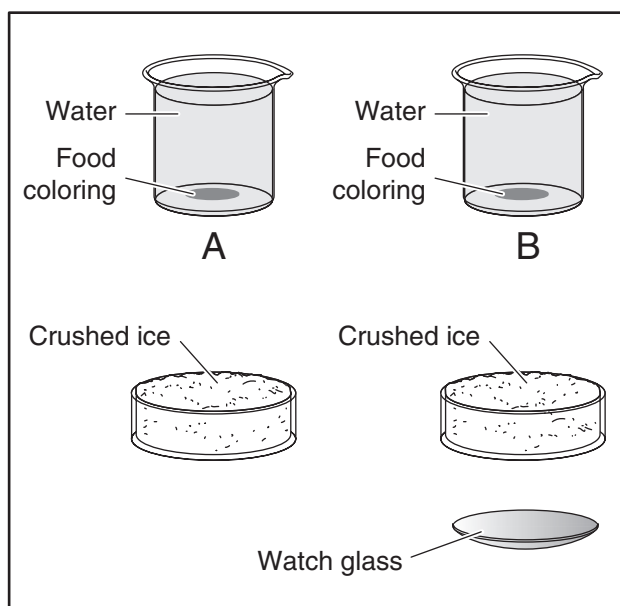
15 What process is shown above?

- A** Cellular ingestion
- B** Pseudopod formation
- C** Cell wall digestion
- D** Binary fission

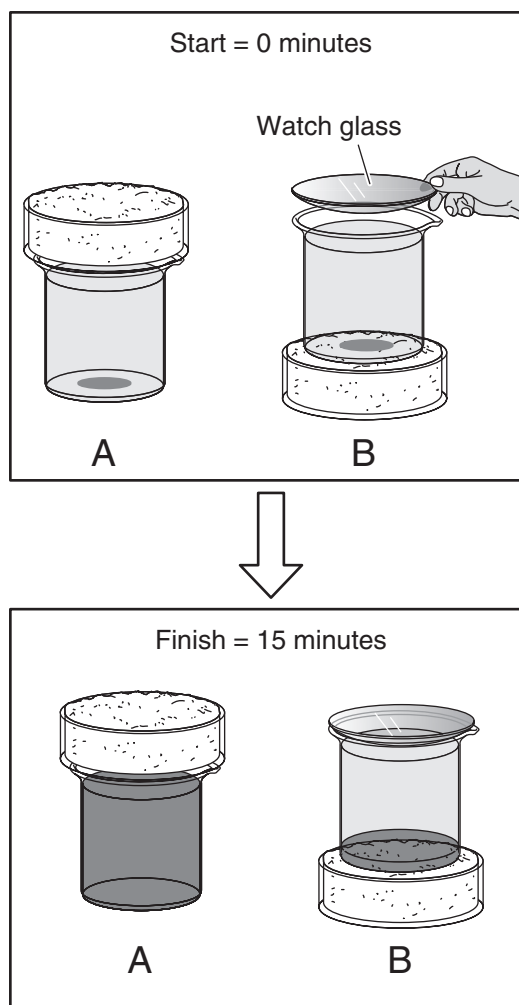
16 The typical automobile's kinetic energy is converted to heat energy when the brakes are applied. A braking system that converts kinetic energy to electrical energy instead of heat energy has been designed. The electrical energy can be used later to move the car again. How does a system like this benefit the environment?

- F** Greater use of solar energy
- G** Ability to harness wind energy
- H** Decreased use of fossil fuels
- J** Use of renewable hydroelectricity

Experimental Preparation



Experiment



- 17 After 15 minutes the food coloring in Beaker A is evenly spread throughout the beaker, while Beaker B contains a thin layer of food coloring only at its bottom. These observations support the theory that convection currents in a fluid form more quickly if the fluid has —

- A warmer layers at the bottom
- B a covering on its surface
- C reduced pressure on the bottom
- D contact with a cooler surface

- 18 Red marrow is the principal tissue that produces red blood cells in humans. In which body system is red marrow found?

F Integumentary system
G Respiratory system
H Nervous system
J Skeletal system

Some Characteristics
of *Diospyros texana*

- Multicellular
- Eukaryotic
- Makes its own food

- 19 Which kingdom does this organism belong to?

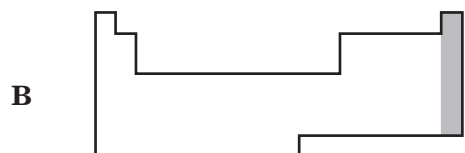
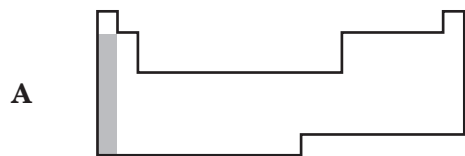
A Fungi
B Archaeobacteria
C Plantae
D Animalia

Reaction of
Copper with Sulfur

Mass of Cu before reaction:	3.17 g
Mass of S before reaction:	2.93 g
Mass of CuS formed:	4.78 g
Mass of unreacted S:	? g

- 20 Copper (Cu) and sulfur (S) were heated in a covered container. After the reaction was complete, the unreacted sulfur was removed. The table contains the results of the investigation. How much sulfur, in grams, failed to react with the copper? Record and bubble in your answer to the nearest hundredth on the answer document.

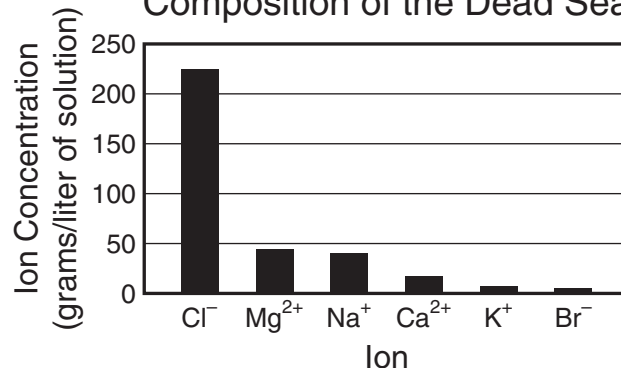
- 21 In which model of the periodic table does the shaded area show the location of elements that require the least energy to lose one electron?



- 22 A woman lifts a 57-newton weight a distance of 40 centimeters each time she does a particular exercise. It takes her 0.60 second to lift the weight. How much power does she supply for lifting the weight one time?

F 24 W
G 34 W
H 38 W
J 95 W

Composition of the Dead Sea



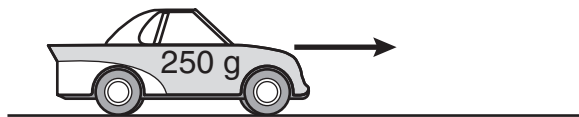
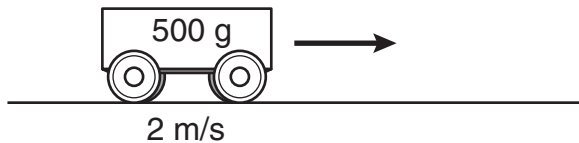
- 23 The graph shows the concentration of ions found in the water of the Dead Sea. Which property of water is responsible for the dissociation of salts that produces the ion concentrations shown in the graph?

A Chemical stability
B High polarity
C Low melting point
D High freezing point

- 24 Diverging lenses are useful to people who suffer from nearsightedness because the lenses can cause images of distant objects to be focused on the retina. Lenses allow images to be focused on the retina because of —

F diffusion
G reflection
H diffraction
J refraction

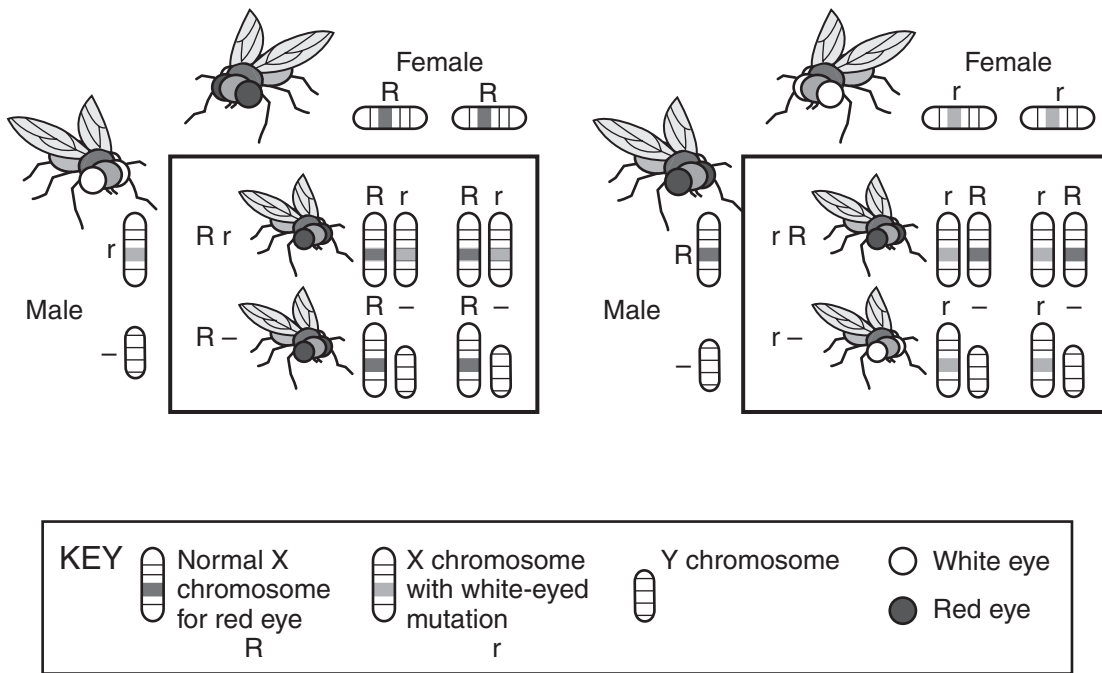
- 25 As the viscosity of a liquid increases, the liquid —
- A conducts electricity
 - B pours more slowly
 - C evaporates more quickly
 - D forms a precipitate



- 26 The 500 g cart is moving in a straight line at a constant speed of 2 m/s. Which of the following must the 250 g toy car have in order to maintain the same momentum as the cart?
- F An acceleration of 5 m/s^2 for 2 seconds
 - G A potential energy of 20 J
 - H A constant velocity of 4 m/s
 - J An applied force of 5 N for 5 seconds

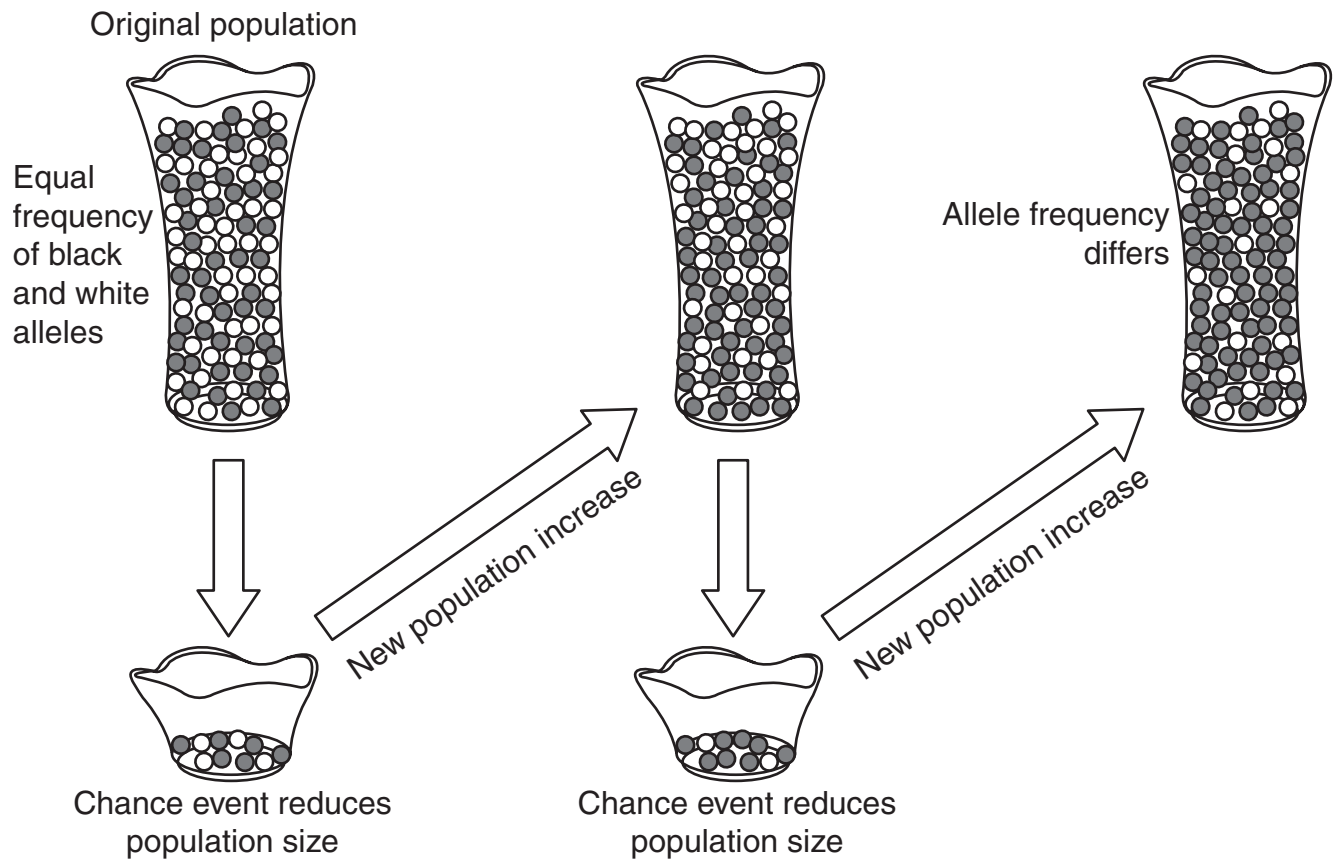
- 27 Which process best demonstrates a chemical change in distilled water?
- A Freezing the water
 - B Separating the water into its elements
 - C Calculating the water's density
 - D Dissolving sugar in the water

Sex-Linked Inheritance



- 28 What do the results of this investigation indicate?
- F This trait is determined by the Y chromosome.
 - G Red-eyed flies always produce red-eyed offspring.
 - H White-eyed flies have many phenotypes for eye color.
 - J This trait is carried only on the X chromosome.

- 29 Two students measured the length of the same stick, each using a different 30 cm ruler. One student reported a length of 22 cm, and the other reported a length of 8 cm. The most likely explanation for the difference in the reported values is that one —
- A student improperly read the ruler
 - B ruler was metal and the other ruler was plastic
 - C student viewed the ruler from a different angle
 - D ruler was constructed with nonstandard cm marks



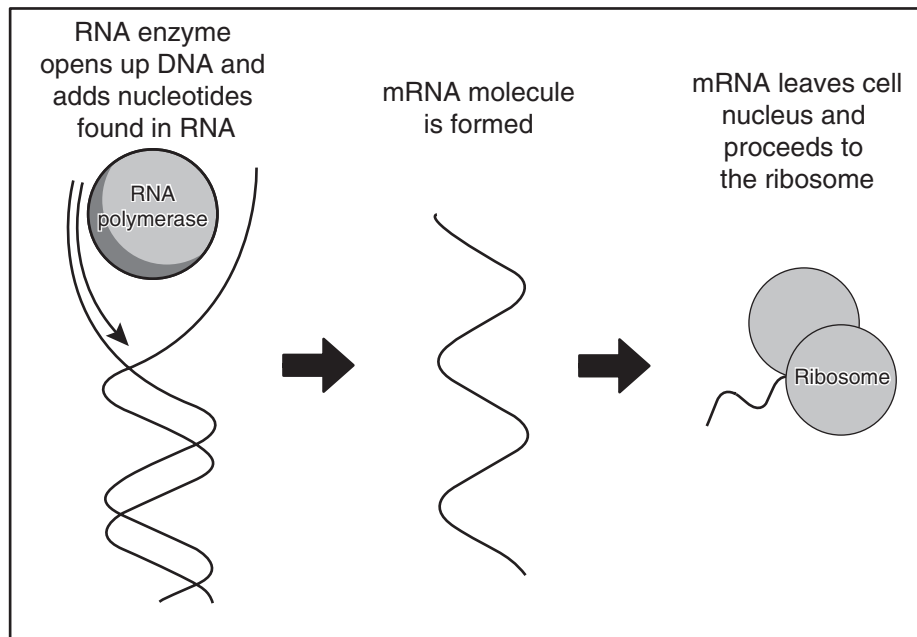
30 The model shows a demonstration a student prepared using black and white marbles to show how populations of organisms can change. Which of the following concepts is best illustrated by this demonstration?

- F** Evolution of a predatory species
- G** Genetic drift accompanying natural selection
- H** Environmentally induced genetic mutations
- J** Immunity from virulent microorganisms

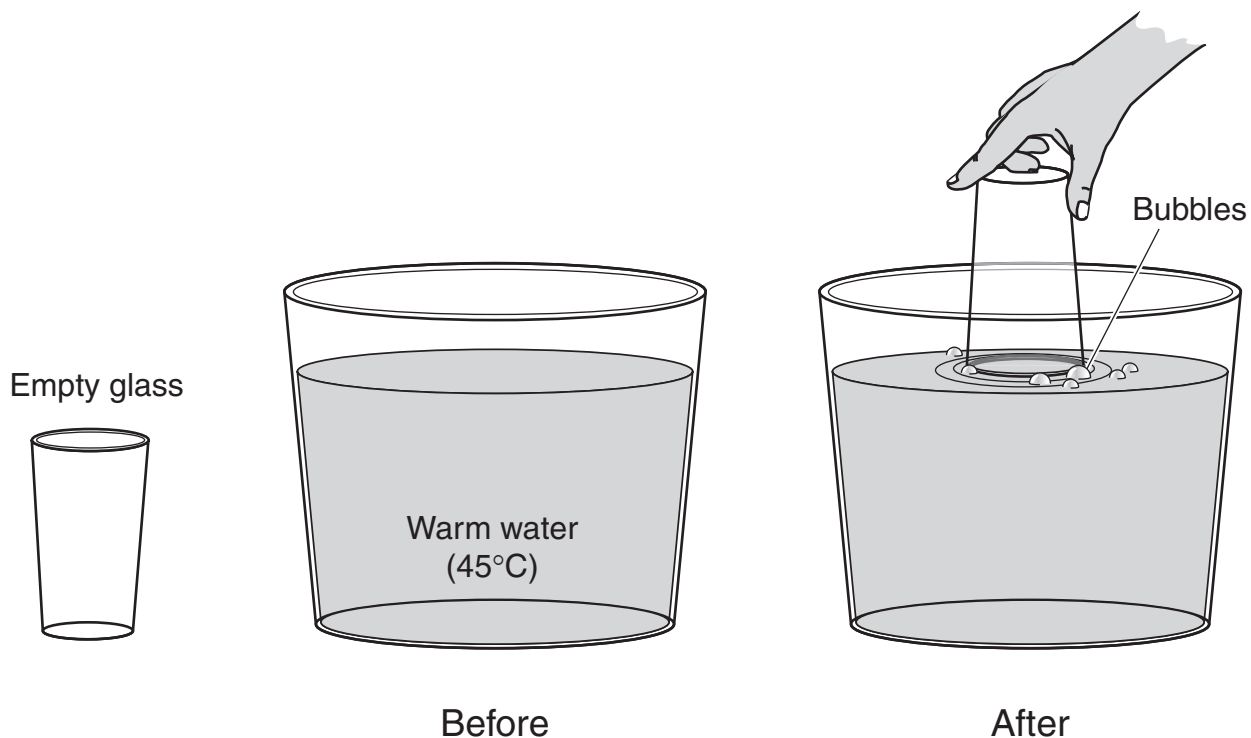
Ulcer Study Results

Treatment Group (200)	Patients Reporting Relief (%)	
	After 2 Weeks	After 4 Weeks
Received medication	33	92
Received placebo (sugar tablet)	13	58

- 31** The table shows the results of a study testing the effectiveness of an ulcer medication. Why was one group given a sugar tablet?
- A** To include a control group
 - B** To have an experimental group
 - C** To provide a variety of treatments
 - D** To give the body additional nutrients



- 32** The diagram above shows how an mRNA molecule is synthesized. What would be the most likely result if a bacterial infection stopped the production of the RNA polymerase?
- F** A protein could not be manufactured.
 - G** A lysosome would digest the cell.
 - H** Osmosis would not occur in the cell.
 - J** Dehydration could be prevented in the cytoplasm.

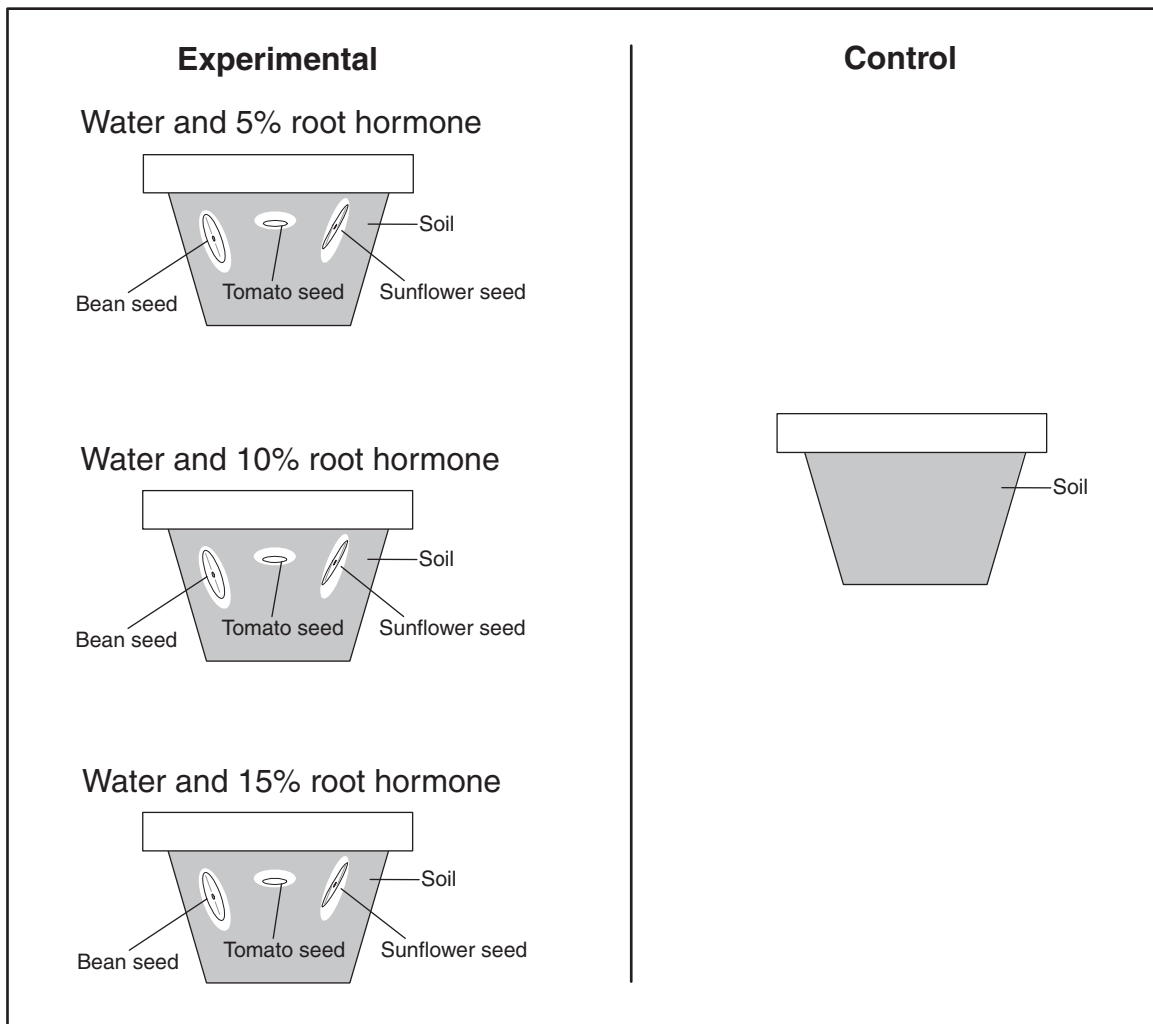


33 A glass is held upside down so that its open end is closed by the water's surface. Soon air bubbles begin to escape from the glass. The best explanation for this observation is that —

- A** water condenses on the glass and escapes as a gas
- B** air in the glass increases the water temperature and causes bubbling
- C** pressurized water vapor rises rapidly and evaporates
- D** air trapped in the glass is warmed and expands in volume

34 A researcher determined the percentage of electrical energy transformed into different forms of energy by a toaster. The best way to communicate these results is to display the data using a —

- F** histogram
- G** circle graph
- H** line graph
- J** box-whisker graph



35 A valid study would include a control group containing —

- A bean seed, tomato seed, sunflower seed, and water
- B water and 2% root hormone
- C water only
- D bean seed, tomato seed, sunflower seed, water, and 1% root hormone

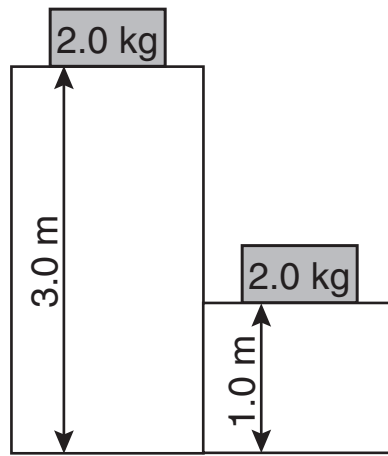
- 36** How is the circulatory system related to the digestive system?
- F** The brain stem controls the heart rate.
 - G** Blood carries nutrients to body cells.
 - H** Stomach muscles contract and expand.
 - J** The pharynx is a passageway for air and food.

- Cytochrome c is a protein found in all aerobic organisms.
- The differences in the amino acid sequence of cytochrome c are used to determine how closely species are related.

Percent Differences in Cytochrome c

	Horse	Dog	Kangaroo	Penguin
Horse	0	6	7	12
Dog	6	0	7	10
Kangaroo	7	7	0	10
Penguin	12	10	10	0

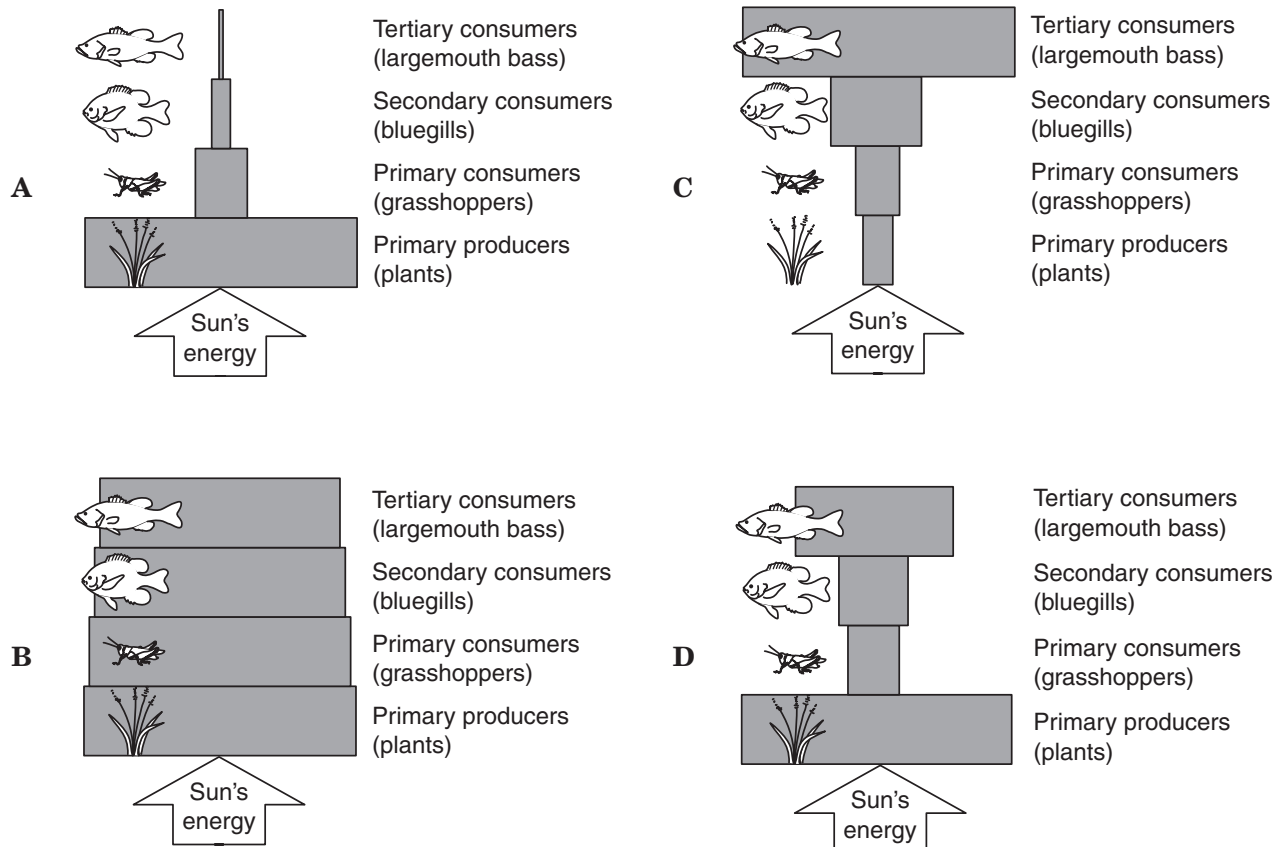
- 37** The table above shows percent differences in cytochrome c in four different animals. According to the table, which two animals are most closely related to each other?
- A** Horse and dog
 - B** Dog and kangaroo
 - C** Horse and penguin
 - D** Penguin and kangaroo



38 What is the approximate difference in gravitational potential energy of the two shaded boxes?

- F 19 J
- G 39 J
- H 59 J
- J 79 J

39 Which diagram best shows how the amount of stored energy changes going up a food chain?



40 Which of these describes a chemical change?

- F** Frost disappears from a window in the morning.
- G** A decrease in temperature reduces the volume of a gas.
- H** Soot is formed as a candle burns.
- J** A cup of hot tea cools down.

Research shows that levels of a certain protein are elevated in the blood of people with a bacterial infection. People with a viral infection show only trace amounts of the protein. The level of the protein can be determined in about an hour after a blood test.

41 Which of these is a benefit of knowing whether a person with a respiratory infection has an elevated level of this protein in the blood?

- A** A set of aerobic exercises can be recommended.
- B** A diet of essential nutrients can be recommended.
- C** A decision can be made about whether to take an x-ray.
- D** A decision can be made about whether to use antibiotics.

Epiphytes

- Epiphytes (example: some orchids) live on trees so they can receive more sunlight.
- Epiphytes have aerial roots that absorb water and minerals from rainwater.
- Epiphytes do not affect the trees on which they live.

42 Which of these best describes the relationship between epiphytes and trees?

- F** Parasitism
- G** Migration
- H** Commensalism
- J** Predation

- 43 A student is working with four beakers that each contain a clear liquid. Which set of procedures would be best to use to determine whether one of the beakers contains only distilled water?

A

Observe odor
Determine temperature
Observe color
Determine boiling point

B

Observe odor
Determine pH
Determine density
Determine boiling point

C

Observe volume
Determine mass
Observe color
Determine pH

D

Determine mass
Observe volume
Determine temperature
Observe odor

- 44 Heavy metals such as mercury, cadmium, and nickel are often found in landfills and occasionally leach into rivers, lakes, and other bodies of water. Such heavy metals are toxic to wildlife and to humans. Which of the following sources of environmental contamination is most often associated with these heavy metals?

F Batteries

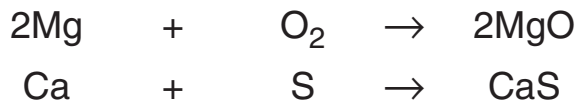
G Plastics

H Automobile exhaust

J Tobacco smoke

Examples
of Group 2
elements

Examples
of Group 16
elements



- 45 The ionic compounds that result from combining Group 2 and Group 16 elements have a 1:1 ratio because —

A Group 2 elements are electrically neutral

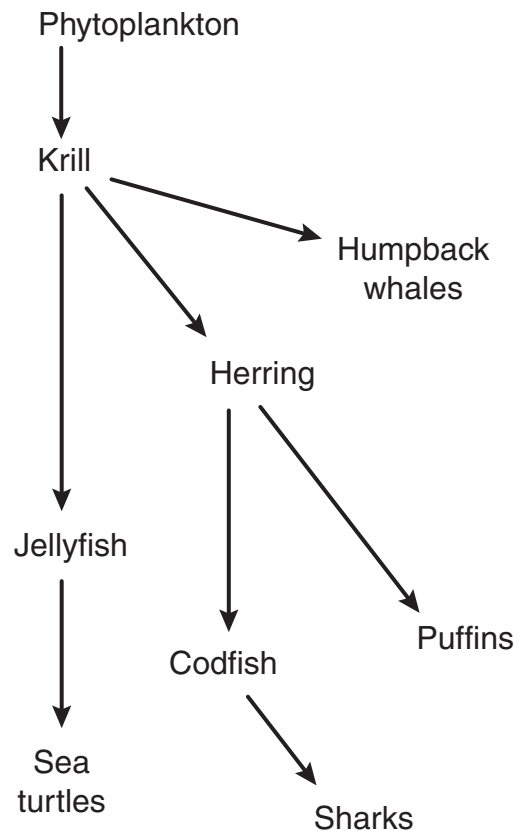
B Group 2 elements have two valence electrons

C Group 2 elements contain neutrons in the nucleus

D Group 2 contains more elements than other groups

46 Which of these would cause the gravitational force between Earth and the sun to decrease?

- F** An increase in the length of a day on Earth
- G** An increase in the distance between Earth and the sun
- H** An increase in the number of planets orbiting the sun
- J** An increase in the masses of Earth and the sun



47 In this diagram of a marine food web, which term describes the sea turtles?

- A** Aquatic herbivores
- B** Autotrophic producers
- C** Third-level consumers
- D** Primary decomposers

48 Which of the following is a change that could be passed on to an organism's offspring?

- F** Damage to the DNA of gamete cells
- G** Damage to skin cells from exposure to sunlight
- H** Damage to DNA in the cytoplasm of cheek cells
- J** Damage to hair pigment cells with permanent dyes

	Velocity (m/s)			
Time (s)	Car Q	Car R	Car S	Car T
1	1	2	2	0
2	2	0	4	1
3	1	2	6	2
4	2	0	8	4
5	1	2	10	8

- 49 The table above shows experimental data collected when four cars moved along a straight-line path. According to these data, which car moved with a constant acceleration of 2 m/s^2 ?

- A Car Q
- B Car R
- C Car S
- D Car T

MTBE Solubility

Temperature (°C)	Solubility (grams per liter)
0	83
9.7	51
19.8	42
29.6	31
39.3	25
48.6	19

- 50 MTBE is a gasoline additive that has entered some groundwater supplies. According to the table above, which of the following water temperatures would allow 79 grams of MTBE to dissolve in 1 liter of water?

F 0°C
G 10°C
H 30°C
J 40°C

- 51 A cyclist moves at a constant speed of 5 m/s. If the cyclist does not accelerate during the next 20 seconds, he will travel —

A 0 m
B 4 m
C 50 m
D 100 m



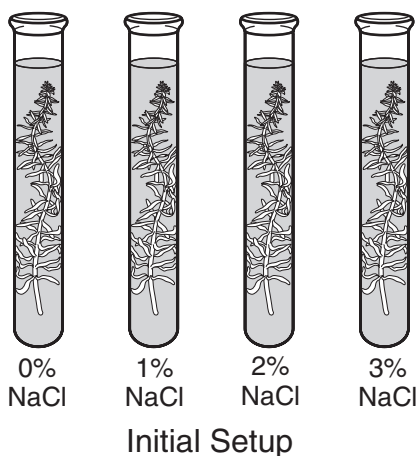
- 52 This picture indicates that the chemical represented is —

F pressurized
G corrosive
H flammable
J toxic

- 53 Birds and reptiles are similar in that they are vertebrates and lay eggs. They differ in that reptiles have teeth and birds have beaks. Some birds do possess teeth. However, these teeth are present only in the embryonic stage. Which conclusion is best supported by the presence of teeth in bird embryos?

A Birds and reptiles share a common ancestor.
B Modern reptiles are the ancestors of modern birds.
C Birds and reptiles eat similar types of food.
D Ancestors of reptiles had beaks similar to those of birds.

Elodea in Different Salt Concentrations



54 Similar sprigs of elodea were placed in four test tubes. Each test tube contained water with a different concentration of salt ranging from 0 to 3 percent. The length of each sprig was measured after 10 days. Which of these questions can best be answered with this experimental setup?

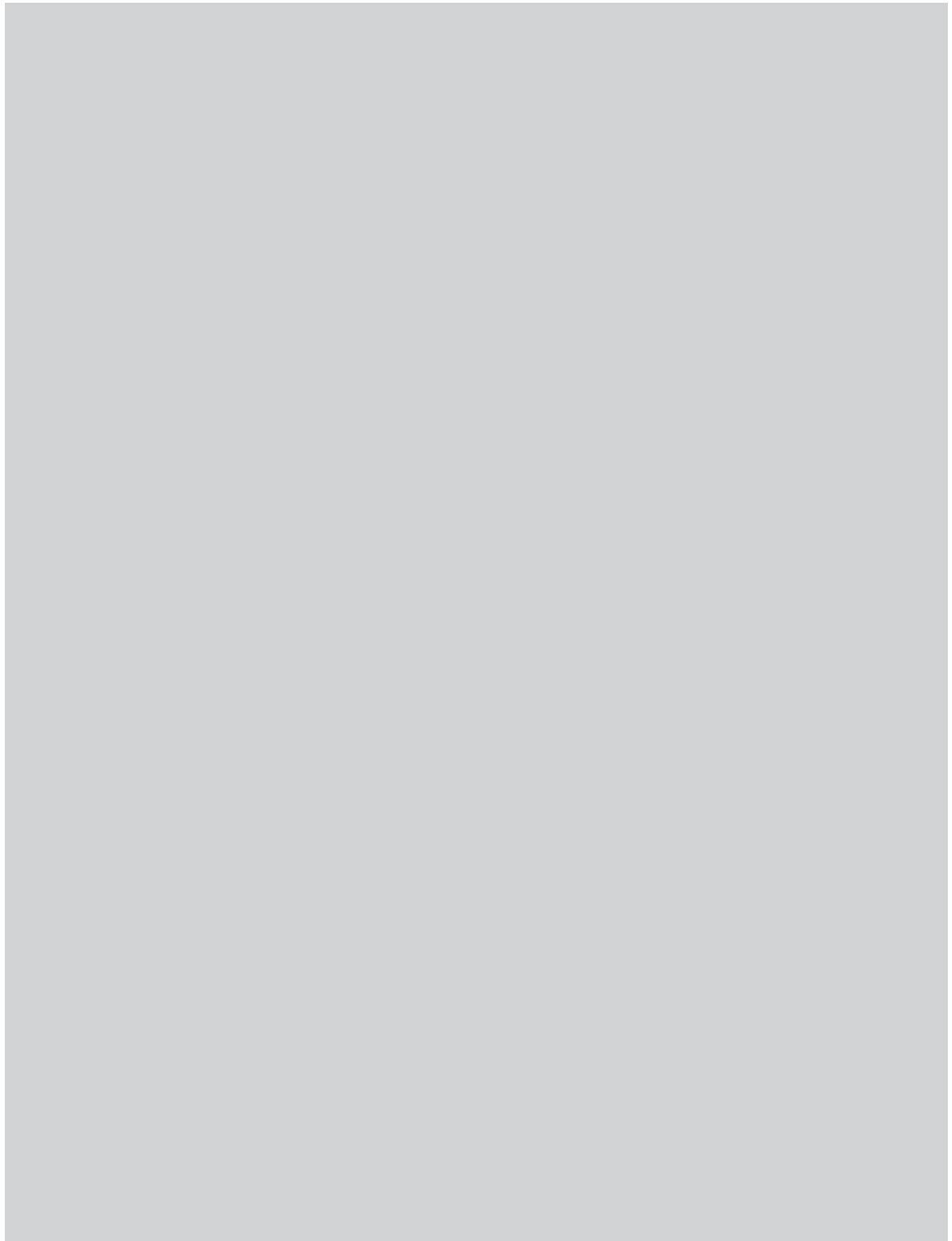
- F** Can the amount of salt in the water help elodea avoid disease?
- G** What happens to salt as elodea uses water?
- H** Will elodea increase the amount of salt in the water?
- J** Does the amount of salt in the water affect elodea growth?

55 Plant leaves have a waxy covering called a cuticle. When some plants are stressed by lack of water, their cuticle increases in thickness. What does this action demonstrate?

- A** Alternation of generations in plants
- B** Structural response to the environment
- C** Differentiation of vascular tissue in plants
- D** Genetic mutation induced by the environment

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS
ON THE ANSWER DOCUMENT.





SOCIAL STUDIES

DIRECTIONS

Read each question and choose the best answer. Then fill in the correct answer on your answer document.

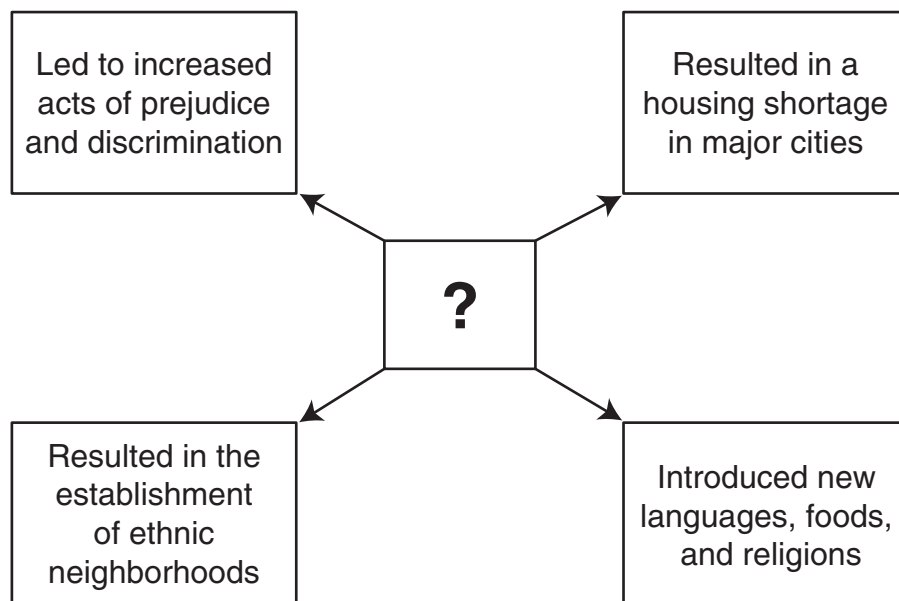
SAMPLE A

Who served as president of the United States during the Civil War?

- A** Thomas Jefferson
- B** Andrew Jackson
- C** James K. Polk
- D** Abraham Lincoln



Use the diagram and your knowledge of social studies to answer the following question.



1 Which of the following best completes the diagram above?

- A Integration
- B Progressivism
- C Imperialism
- D Immigration

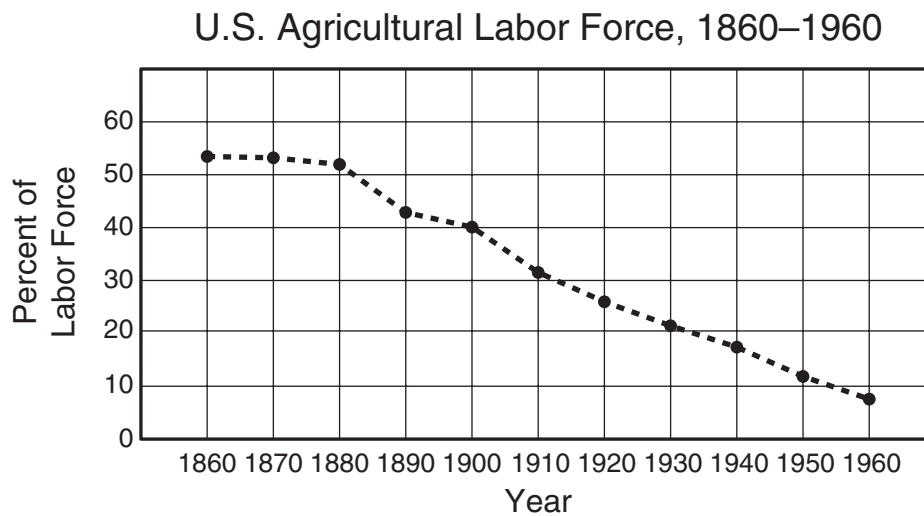
Use the photograph and your knowledge of social studies to answer the following question.



Source: Library of Congress

- 2 Which of the following issues was the most likely reason for the creation of the National Woman's Party, shown in the photograph above?
- F** Promoting conservation legislation
 - G** Ending gender discrimination in voting
 - H** Promoting the growth of big business
 - J** Ending immigration restrictions

Use the graph and your knowledge of social studies to answer the following question.



Source: U.S. Bureau of Labor Statistics

- 3 According to the graph, during which of the following 10-year periods did the greatest change in agricultural labor take place?
- A 1860–1870
 - B 1880–1890
 - C 1920–1930
 - D 1940–1950

Use the excerpt and your knowledge of social studies to answer the following question.

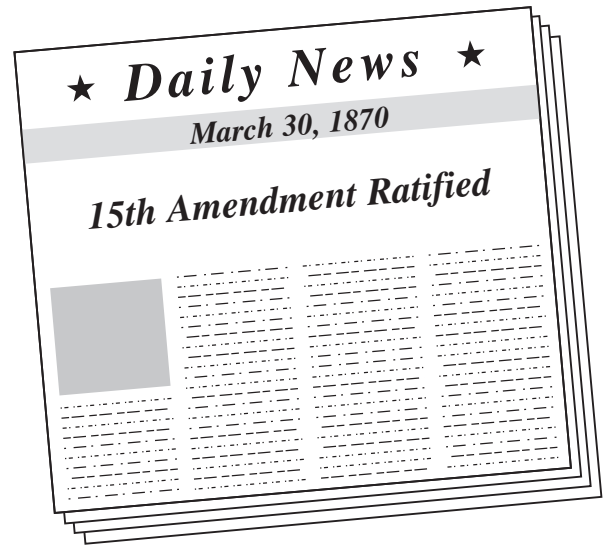
The only possible program, as we see it, is this: . . .

- III. The removal . . . of all economic barriers and the establishment of an equality of trade conditions among all the nations. . . .
- IV. Adequate guarantees given and taken that national armaments will be reduced to the lowest point consistent with domestic safety.
- XIV. A general association of nations must be formed. . . .

— *President Woodrow Wilson, Fourteen Points Speech to Congress, January 8, 1918*

- 4 The three points listed above support President Wilson's belief that the Fourteen Points were —
- F arranged by private negotiations
 - G important to the United States' supremacy
 - H necessary to prevent future wars
 - J reasons for punishing Germany

Use the headline and your knowledge of social studies to answer the following question.



- 5 The headline above refers to a constitutional amendment that —
- A allows for taxes on income
 - B protects the right to freedom of expression
 - C expands the right to vote
 - D details the rights of the accused in criminal cases

6 Which of the following events helped trigger the start of the Great Depression?

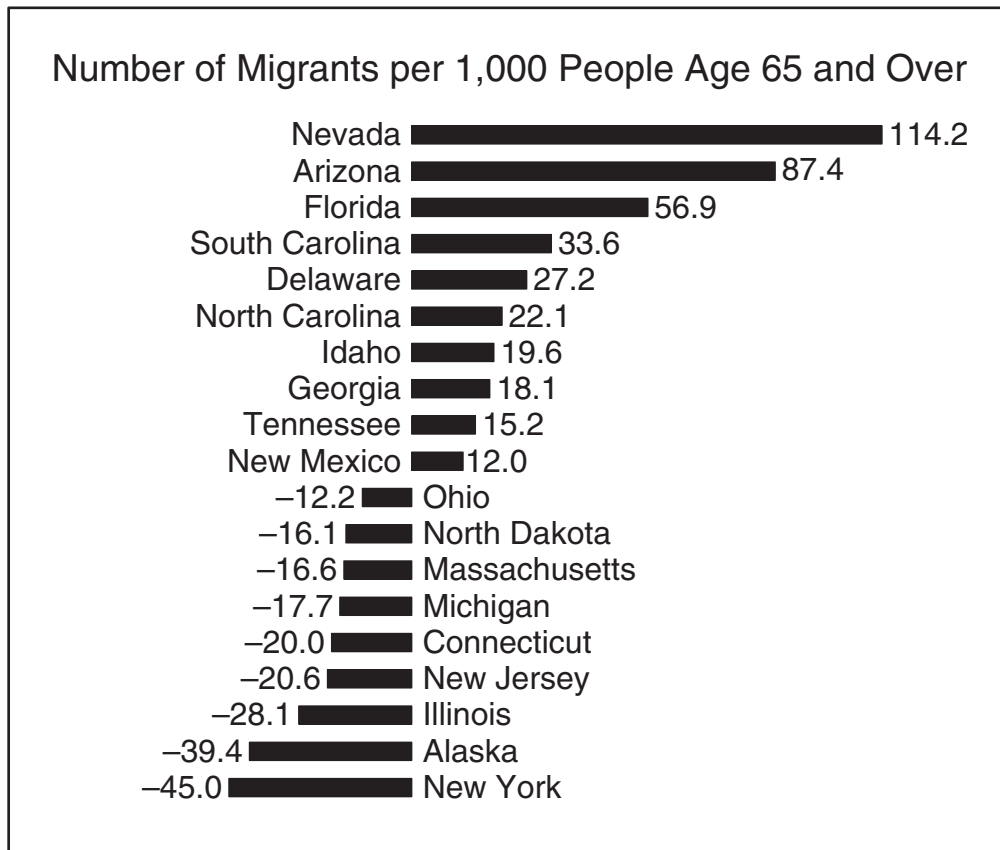
- F** Palmer Raids
- G** Bonus Army march
- H** World War I
- J** Stock market crash

7 Which of the following is the most likely motive for market-oriented agriculture?

- A** Organic farming
- B** Recreational farming
- C** Subsistence farming
- D** Farming for profit

Use the graph and your knowledge of social studies to answer the following question.

States with the Highest and Lowest Net Migration Rates
for the Population 65 Years and Older, 1995–2000



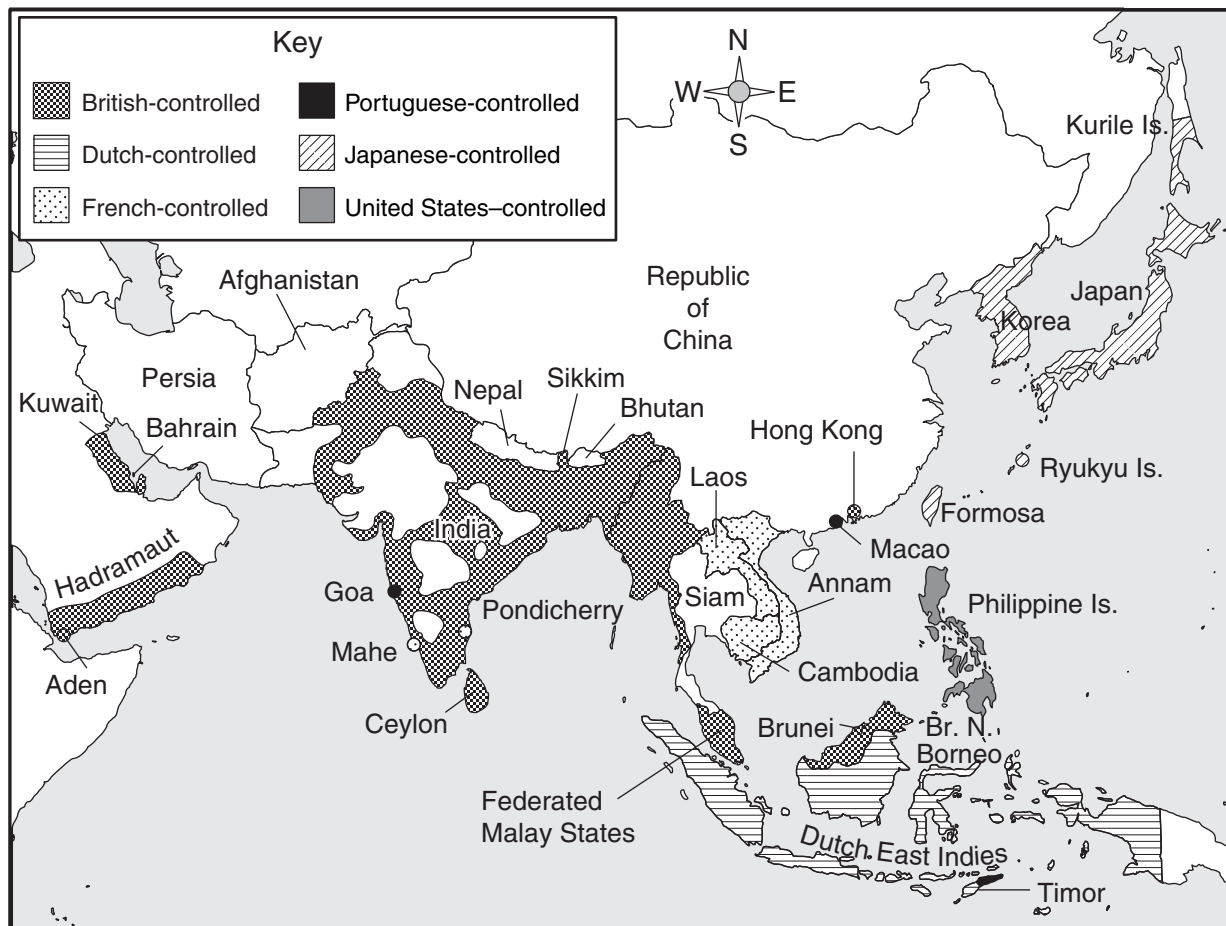
Source: U.S. Census Bureau

- 8 Based on the graph above, most people 65 and older who migrated to different states moved to states —
- F** in warmer climates
 - G** along the Great Lakes
 - H** in the Rocky Mountains
 - J** along northern coastlines

- 9 During the 1920s, the growth of which of the following industries had the greatest effect on the expansion of the steel, rubber, and petroleum industries?
- A Airplane
 - B Farm products
 - C Automobile
 - D Sewing machine

Use the map and your knowledge of social studies to answer the following question.

Imperialism in Asia, 1914



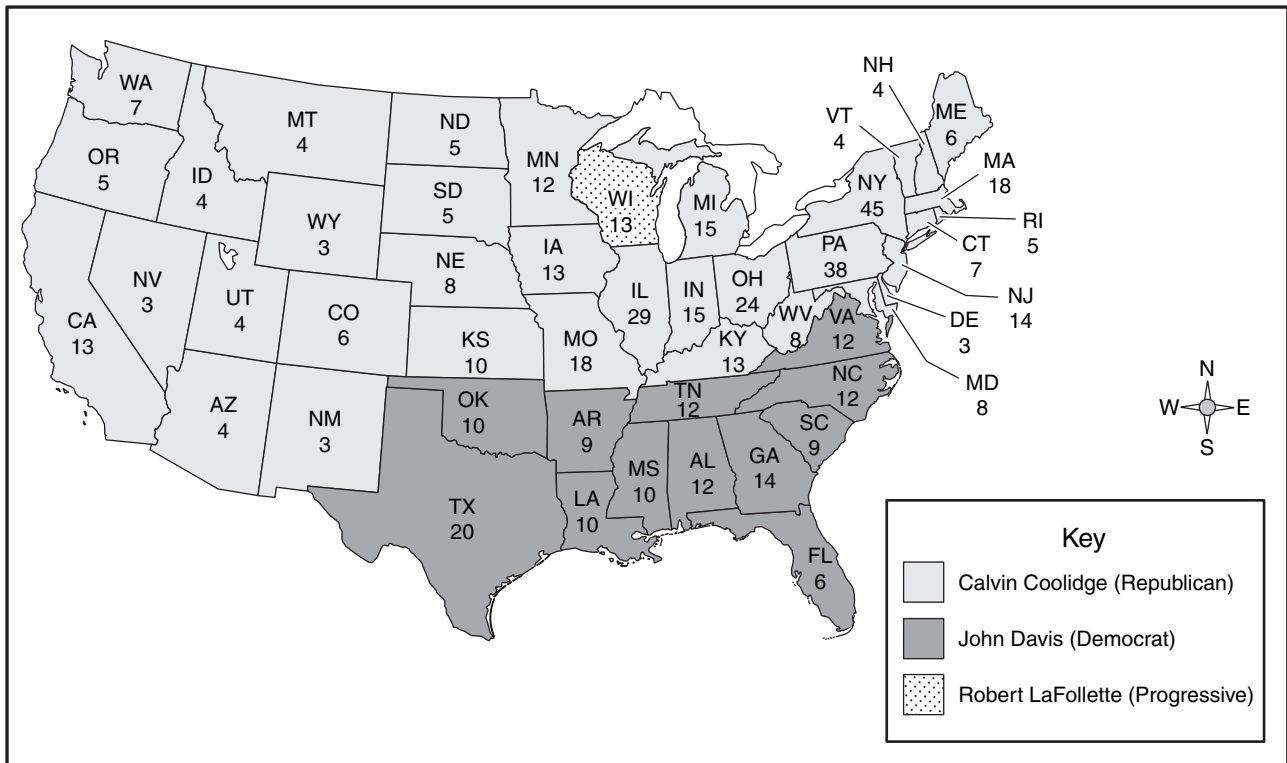
10 Which of these nations controlled the greatest number of territories shown on the map above?

- F** France
- G** United States
- H** Portugal
- J** Great Britain

- 11** Freedom of speech and freedom of the press are important to the U.S. system of government because democracy relies on people to —
- A** restrict unpopular views expressed in public
 - B** make educated decisions on matters of public concern
 - C** support the rise of a totalitarian dictator
 - D** promote the advantages of a socialist economy

Use the map and your knowledge of social studies to answer the following question.

1924 Presidential Election Distribution of Electoral Votes



12 Which of the following questions can be answered from the map above?

F How many people in Texas voted in the 1924 presidential election?

G What percentage of the population in California voted Republican?

H Which candidate won the electoral vote in North Carolina?

J How many people in New York voted for the Democratic candidate?

Use the information in the box and your knowledge of social studies to answer the following question.

- The police search a house suspected of containing stolen goods.
- The police do not obtain a warrant for the search.
- The prosecuting attorney refers to the results of the search in the trial.

- 13 Which of the following court cases is directly related to the scenario described above?
- A *Gideon v. Wainwright*: The accused has the right to an attorney in state felony cases.
 - B *Escobedo v. Illinois*: The accused has the right to an attorney during police interrogation.
 - C *Reynolds v. Sims*: Congressional districts should be equal in population.
 - D *Mapp v. Ohio*: Evidence seized illegally cannot be used in a court of law.

Use the excerpt and your knowledge of social studies to answer the following question.

We have done everything that could be done to avert the storm which is now coming on. We have petitioned. . . . Our petitions have been slighted. . . . There is no longer any room for hope. If we wish to be free . . . we must fight!

— Patrick Henry, 1775

- 14 Patrick Henry's speech warns of the approach of a storm, which turned out to be —
- F the Whiskey Rebellion
 - G the American Revolution
 - H the French and Indian War
 - J Shays's Rebellion
- 15 During the 1920s, what was the most likely reason for the existence of illegal bars called speakeasies?
- A Conservation
 - B Immigration
 - C Prohibition
 - D Unionization

Use the map and your knowledge of social studies to answer the following question.

Poland, 1939



16 According to the map, which of the following cities fell under German occupation in 1939?

- F** Königsberg
- G** Bialystok
- H** Breslau
- J** Krakow

- 17** In 1963 the Birmingham, Alabama, police shocked the nation by using fire hoses and attack dogs in their response to civil rights protestors. Shortly after the violence in Birmingham, President John F. Kennedy declared it was time to —
- A** increase the government's commitment to civil rights
 - B** enforce voting restrictions that discriminate based on race
 - C** decrease the government's involvement in states' rights issues
 - D** limit access to the media by civil rights protestors

- 18** Which New Deal agency continues to protect against the loss of savings in personal accounts?
- F** Works Progress Administration
 - G** Tennessee Valley Authority
 - H** Social Security Administration
 - J** Federal Deposit Insurance Corporation

Use the poster and your knowledge of social studies to answer the following question.



Source: NARA

- 19 It can be inferred from the World War II poster above that the U.S. government wanted labor and management —
- A to compete for the loyalty of workers
 - B to enlist in military service
 - C to protest the nation's participation in the war
 - D to cooperate to help win the war

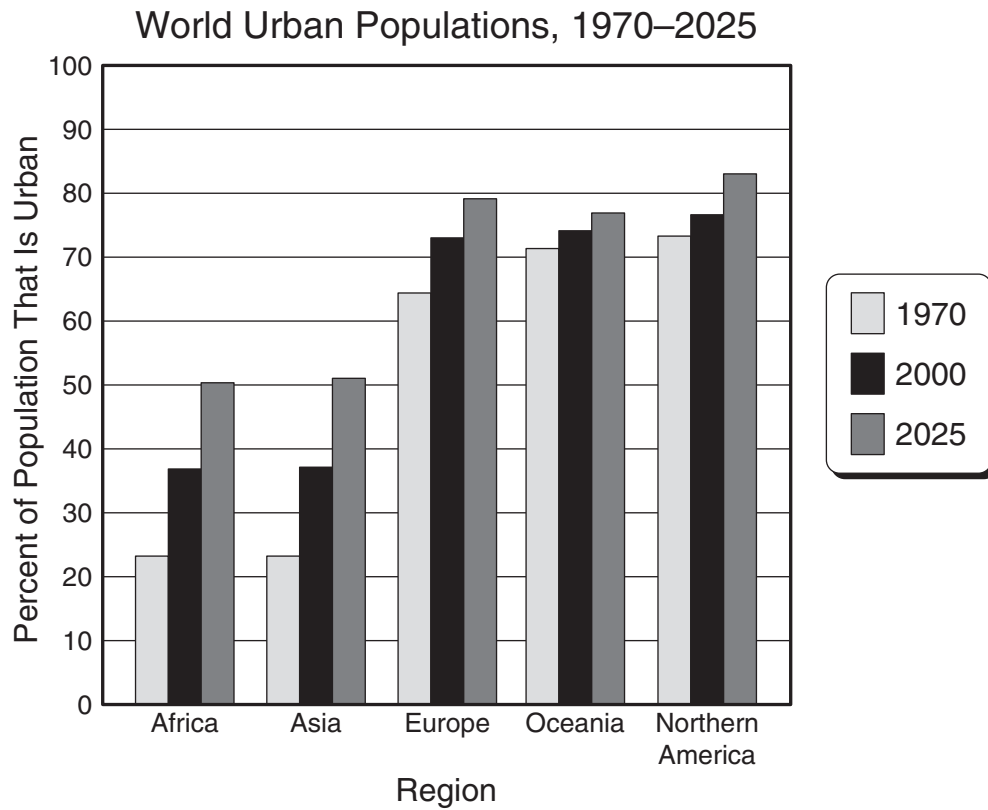
Use the excerpt and your knowledge of social studies to answer the following question.

Excerpt from the Declaration of Independence

He has refused to pass other laws for the accommodation of large districts of people, unless those people would relinquish the right of representation in the legislature. . . .

- 20 How does the U.S. Constitution address this complaint detailed in the Declaration of Independence?
- F “No person shall be a representative who shall not have attained to the age of twenty-five years. . . .”
 - G “Each house may . . . with the concurrence of two thirds, expel a member.”
 - H “Representatives . . . shall be apportioned among the several states . . . according to their respective numbers. . . .”
 - J “The senators and representatives shall receive a compensation for their services. . . .”

Use the graph and your knowledge of social studies to answer the following question.



- 21** According to the graph, which geographic area is expected to experience the smallest change in percent of urban population by 2025?
- A** Africa
 - B** Europe
 - C** Asia
 - D** Oceania

22 During the Cold War, nations formed the North Atlantic Treaty Organization (NATO) for the purpose of —

F advancing communism

G free trade

H mutual defense

J terrorism control

Use the table and your knowledge of social studies to answer the following question.

Estimated Economic Indicators for Nations
Formerly Part of Yugoslavia, 2002

Nation	Gross Domestic Product	Gross Domestic Product per Capita	Rate of Unemployment
Bosnia and Herzegovina	\$7.30 billion	\$1,900	40.0%
Croatia	\$43.12 billion	\$9,800	21.7%
Macedonia	\$10.57 billion	\$5,100	37.0%
Serbia and Montenegro	\$23.15 billion	\$2,200	32.0%
Slovenia	\$37.06 billion	\$19,200	11.0%

Source: CIA World Factbook

- 23** Ethnic conflict in Yugoslavia led to its breakup into five republics. According to the information in the table, which of the five republics has the highest level of economic development?
- A** Bosnia and Herzegovina
 - B** Croatia
 - C** Serbia and Montenegro
 - D** Slovenia

- 24** The labor movement grew rapidly during the late 1800s because of —

- F** an increase in agricultural production
- G** a significant fall in stock prices
- H** an increase in wages for unskilled labor
- J** a significant growth in industry

- 25** U.S. citizens at home were directly affected during World War II by the —

- A** government rationing of essential goods
- B** rise in the unemployment rate
- C** worsening of the economic depression
- D** government ending the military draft

26 The Open Door policy was implemented as a result of attempts by foreign nations to restrict trade with —

- F** Japan
- G** India
- H** Korea
- J** China

28 During World War II, the United States became an ally of which of the following European dictators?

- F** Adolf Hitler
- G** Joseph Stalin
- H** Benito Mussolini
- J** Francisco Franco

Use the headline and your knowledge of social studies to answer the following question.



27 How did the United States initially respond to the event described in the headline above?

- A** The president ordered the construction of the Berlin Wall.
- B** Congress appropriated additional money to develop a hydrogen bomb.
- C** Congress emphasized science and math education as a matter of national security.
- D** The president created a national committee on physical fitness.

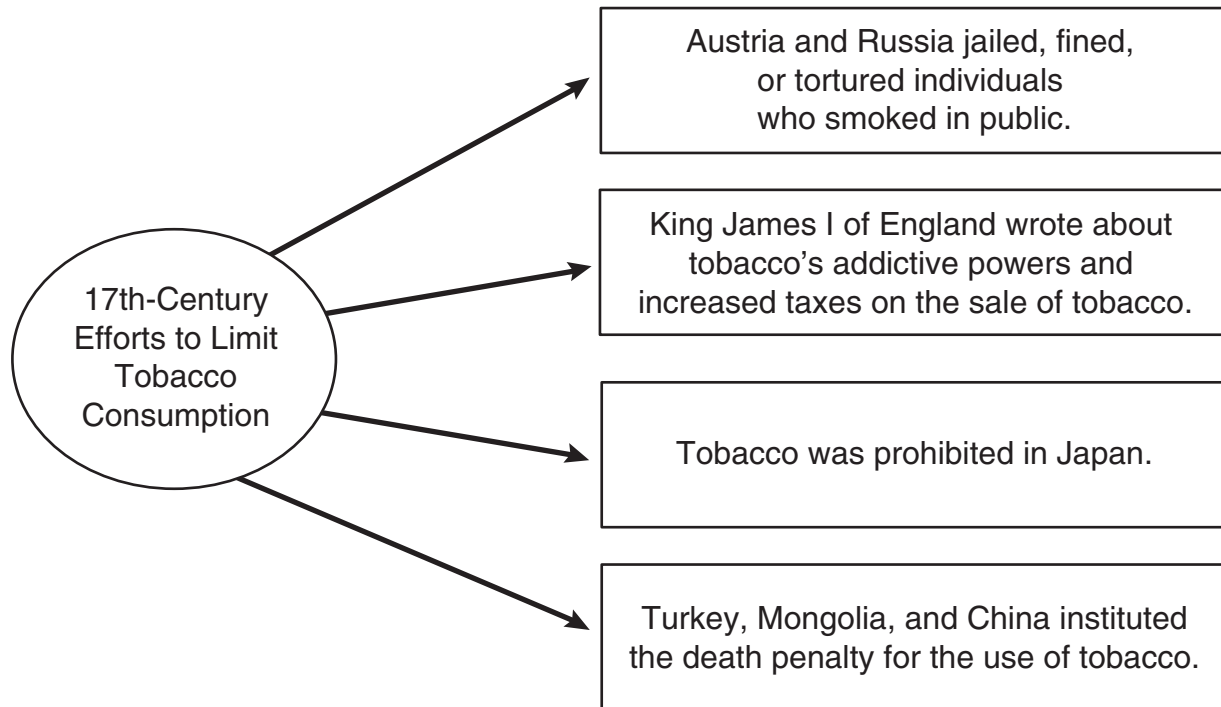
Use the map and your knowledge of social studies to answer the following question.

Napoleon's Empire, 1812



- 29 According to the map above, which of the following statements about Napoleon's Empire in 1812 is true?
- A The entire Russian Empire was under Napoleon's control.
 - B Napoleon did not have any allies among the nations of Europe.
 - C Most of Europe was under Napoleon's influence.
 - D Southern Europe remained free of Napoleon's control.

Use the diagram and your knowledge of social studies to answer the following question.



- 30 Christopher Columbus is credited with introducing tobacco to Europe after his voyage in 1492. Based on the diagram above, it can be supported that tobacco consumption —
- F** resulted in restrictive trade policies between European powers
 - G** led to the economic policy of mercantilism
 - H** extended to many areas of the world
 - J** emerged from the development of representative government

Use the information in the box and your knowledge of social studies to answer the following question.

1. The Japanese bomb Pearl Harbor.
2. U.S. and Filipino soldiers are taken captive at Bataan.
3. ???
4. An atomic bomb is dropped on Hiroshima.

31 Which statement best completes the sequence of events listed above?

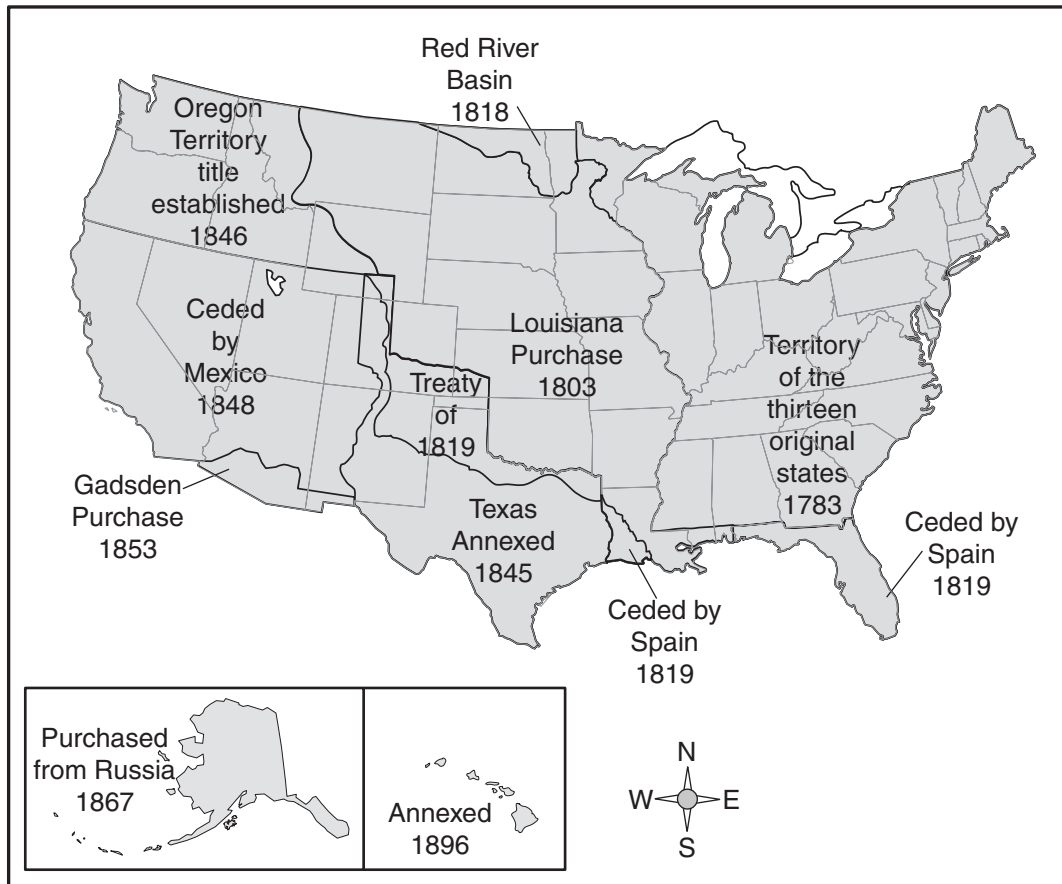
- A The Japanese suffer a major defeat at Midway.
- B The Japanese surrender on board a U.S. battleship.
- C The United States initiates an oil embargo against Japan.
- D The U.S. government apologizes for the internment of Japanese Americans.

32 In which of the following did attorney Clarence Darrow defend an instructor accused of teaching the theory of evolution?

- F *Plessy v. Ferguson*
- G The Scopes trial
- H The Alger Hiss spy trial
- J *United States v. Nixon*

Use the map and your knowledge of social studies to answer the following question.

Territorial Expansion of the United States



Source: U.S. Geological Survey

33 Which of the following statements is supported by the information on the map above?

- A** The territory of the thirteen original states included present-day Florida.
- B** The United States ceased to expand after 1803.
- C** The United States acquired territory from several different nations.
- D** The territory ceded by Mexico included Texas and New Mexico.

34 What was the major reason for the growth of representative government during the colonial period?

- F** Swedish immigrants introduced the principle of separation of powers.
- G** Spanish missionaries advocated an established state religion.
- H** German farmers proposed a constitutional monarchy.
- J** British settlers established legislative bodies similar to Parliament.

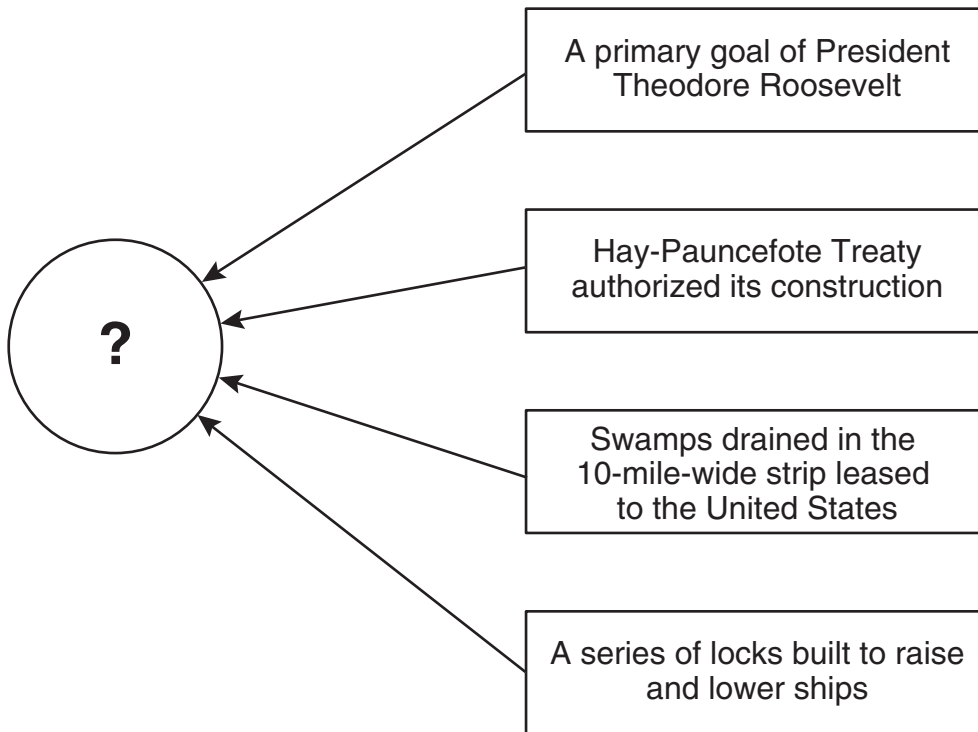
Use the information in the box and your knowledge of social studies to answer the following question.

- Austria-Hungary declares war on Serbia, July 28, 1914.
- The United States enters the three-year-old war.
- The U.S. Congress passes the Selective Service Act.
- General John J. Pershing commands the American Expeditionary Forces.
- The armistice, ending the war, is signed on November 11, 1918.

35 Which war is described by the information above?

- A** Spanish-American War
- B** World War I
- C** World War II
- D** Korean conflict

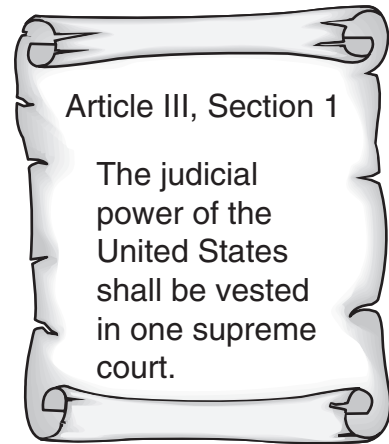
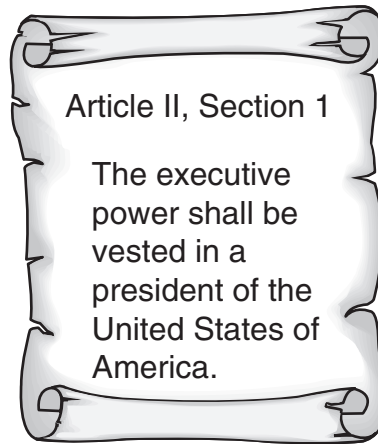
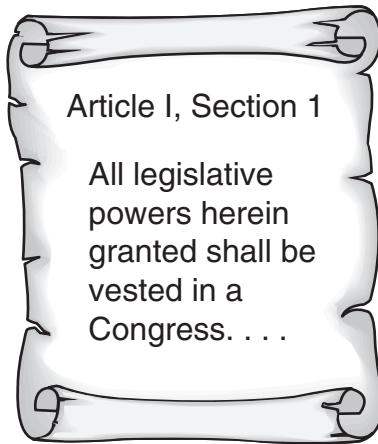
Use the diagram and your knowledge of social studies to answer the following question.



36 Which of the following best completes the diagram above?

- F** Hoover Dam
- G** Golden Gate Bridge
- H** Panama Canal
- J** Transcontinental railroad

Use the illustrations and your knowledge of social studies to answer the following question.



37 Which of the following principles do the illustrations above best represent?

- A Popular sovereignty
- B Implied powers
- C Federalism
- D Separation of powers

38 John Locke wrote about the unalienable rights of life, liberty, and property because most nations —

- F guaranteed rights to women
- G limited rights to the privileged few
- H protected rights with state constitutions
- J restricted the power of the ruler

Selected Legislative Action Taken by the German Reichstag

1898	1900	1913
<ul style="list-style-type: none"> Passed first German naval law, which increased fleet to 19 battleships Became sixth-largest fleet in the world 	<ul style="list-style-type: none"> Passed second German naval law, which increased fleet to 38 battleships Threatened British naval superiority 	<ul style="list-style-type: none"> Passed army bill, which increased peacetime strength of German army by 25% to 870,000 men Increased taxes

- 39** It can be concluded from the chart above that the Reichstag most likely passed the legislation described above in an effort to —
- A** stabilize the German defense budget
 - B** promote Germany as a strong industrial nation
 - C** increase funding of German industrialization
 - D** strengthen the military presence of Germany

Use the photograph and your knowledge of social studies to answer the following question.



© CORBIS

40 The photograph above depicts a demonstration during the Vietnam conflict. It reflects —

- F** bitter opposition to U.S. foreign policy
- G** popular sympathy for Soviet communism
- H** widespread support for military buildup
- J** unanimous support for the president

Use the information in the box and your knowledge of social studies to answer the following question.

William Lloyd Garrison

- Founded a Boston newspaper called *The Liberator* in 1831
- Favored northern secession from the southern states
- Burned a copy of the U.S. Constitution and said, "So perish all compromises with tyranny!"

41 The information in the box describes William Lloyd Garrison, who became a leading advocate for abolishing —

- A child labor
- B monopolies
- C slavery
- D direct taxes

Use the diagram and your knowledge of social studies to answer the following question.

History of the Piñata

Piñata comes from the Italian word *pignatta*, which means "fragile pot."



Piñatas were originally made of clay pots.



Piñatas spread from Italy to Spain.



Spanish missionaries brought piñatas to Mexico.

42 The information above supports the idea that the use of piñatas during celebrations is a result of —

- F free trade
- G conservation measures
- H cultural diffusion
- J technological innovations

- 43** Which of the following conflicts resolved the issue of slavery and ended states' efforts to declare a law of Congress null and void?
- A** The Revolutionary War
 - B** The War of 1812
 - C** The Mexican War
 - D** The Civil War

Use the painting and your knowledge of social studies to answer the following question.



Source: Library of Congress

- 44 As illustrated by the painting above, what role did George Washington play during the American Revolution?
- F** President of the United States
 - G** Commander of the Continental army
 - H** U.S. Secretary of War
 - J** Commander of the French army

Use the headlines and your knowledge of social studies to answer the following question.



- 45 As a result of the events described in the headlines above, the United States —
- A became a world power
 - B remained an isolationist in world affairs
 - C rejected imperialism
 - D placed limitations on foreign travel

Use the information in the box and your knowledge of social studies to answer the following question.

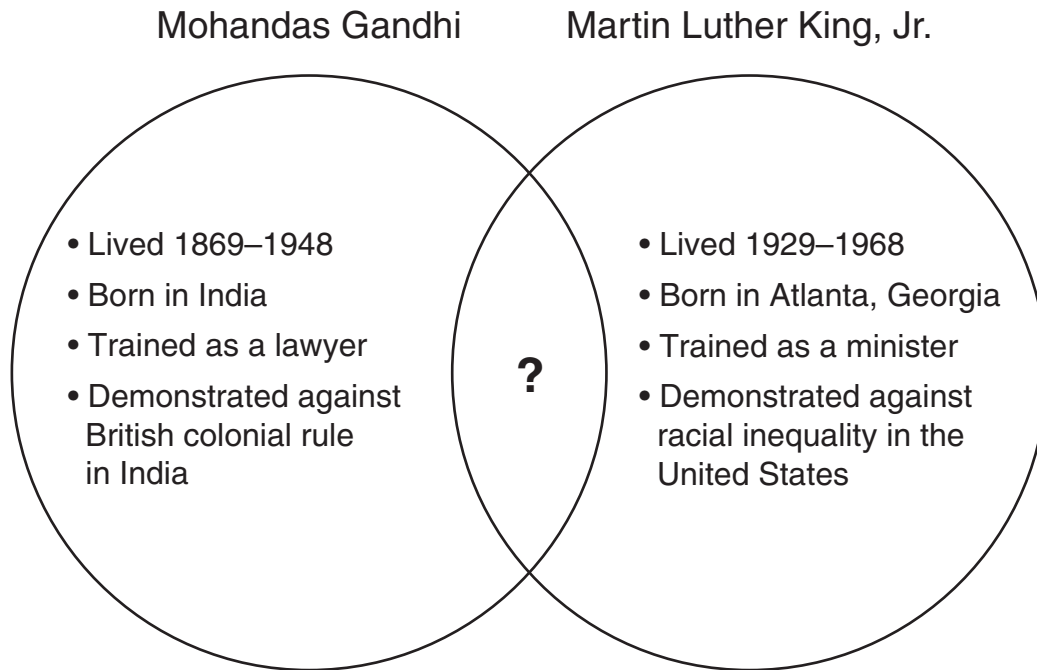
Refugee Act of 1980

- Defines a refugee as any person leaving his or her country based on a well-founded fear of persecution
- Applies to race, religion, nationality, membership in a particular group, or political opinion
- Predicted the admission of 50,000 refugees each year

46 The act above assists individuals who leave their homeland as a result of —

- F** severe discrimination
- G** poor economic conditions
- H** few educational opportunities
- J** extreme weather conditions

Use the diagram and your knowledge of social studies to answer the following question.



47 Which of the following best completes the diagram above?

- A Favored extensive limits on free speech
- B Supported stricter immigration laws
- C Used nonviolent protest strategies
- D Effected little social change

Use the table and your knowledge of social studies to answer the following question.

Population Change for the 10 Most Populous
U.S. Cities, 1990–2000

City and State	1990 Population	2000 Population	Percent Change
New York, NY	7,322,564	8,008,278	9.4
Los Angeles, CA	3,485,398	3,694,820	6.0
Chicago, IL	2,783,726	2,896,016	4.0
Houston, TX	1,630,553	1,953,631	19.8
Philadelphia, PA	1,585,577	1,517,550	–4.3
Phoenix, AZ	983,403	1,321,045	34.3
San Diego, CA	1,110,549	1,223,400	10.2
Dallas, TX	1,006,877	1,188,580	18.0
San Antonio, TX	935,933	1,144,646	22.3
Detroit, MI	1,027,974	951,270	–7.5

Source: U.S. Census Bureau

- 48 Which statement can best be supported from the information in the table about the population change of these cities?
- F** The ranking of the 10 most populous cities remained constant from 1990 to 2000.
 - G** The ranking for Phoenix, Arizona, remained the same.
 - H** Three cities in Texas are ranked among the 10 most populous cities.
 - J** The city that showed the greatest percent change from 1990 to 2000 was Philadelphia, Pennsylvania.

Use the information in the box and your knowledge of social studies to answer the following question.

Anasazi People

- ❖ Known as “the Ancient Ones”
- ❖ Began as hunters and gatherers
- ❖ Later became seasonal hunters and farmers
- ❖ Many lived in surface pit houses made of adobe and rock
- ❖ Some built a series of apartment-like dwellings into the sides of mesas

- 49 Which of these statements best identifies why the Anasazi lived in the type of dwellings described above?
- A They adapted to their environment by using available resources.
 - B Their economy required family dwellings to be temporary.
 - C There was an abundance of lumber for constructing their houses.
 - D The design of their buildings depended on the growing season.

Use the map and your knowledge of social studies to answer the following question.

Declassified Central Intelligence Agency Document
Concerning the Cuban Missile Crisis



Source: Central Intelligence Agency

- 50 According to the map, which city was least likely to suffer the immediate effects of Soviet missiles fired from Cuba?
- F San Antonio
 - G Dallas
 - H Los Angeles
 - J Seattle

Use the excerpt and your knowledge of social studies to answer the following question.

When our moneyed classes . . . found out that living and gathering riches on the half-paid toil of workers was a pleasant thing they had no further scruples. . . . They seemed . . . to adopt Vespasian's famous maxim, "ill-gotten gains do not stink."

— *Excerpt from an unsigned editorial in the Labor Standard, June 16, 1877*

- 51 The author of the excerpt above describes a condition that resulted from industrialization and criticizes the —
- A wealthy for taking advantage of workers
 - B workers for not joining trade unions
 - C workers for not supporting management
 - D government for protecting workers

Use the photograph and your knowledge of social studies to answer the following question.



© Getty Images 5044

52 What is the most likely reason the structure illustrated above was built along China's northern border?

- F** To increase tourism
- G** To control flooding
- H** To provide protection
- J** To increase trade

53 The actions of which of the following individuals led to a boycott of public transportation that lasted over a year, until segregated buses were declared unconstitutional?

- A** Elizabeth Eckford
- B** James Farmer
- C** Rosa Parks
- D** Medgar Evers

Use the table and your knowledge of social studies to answer the following question.

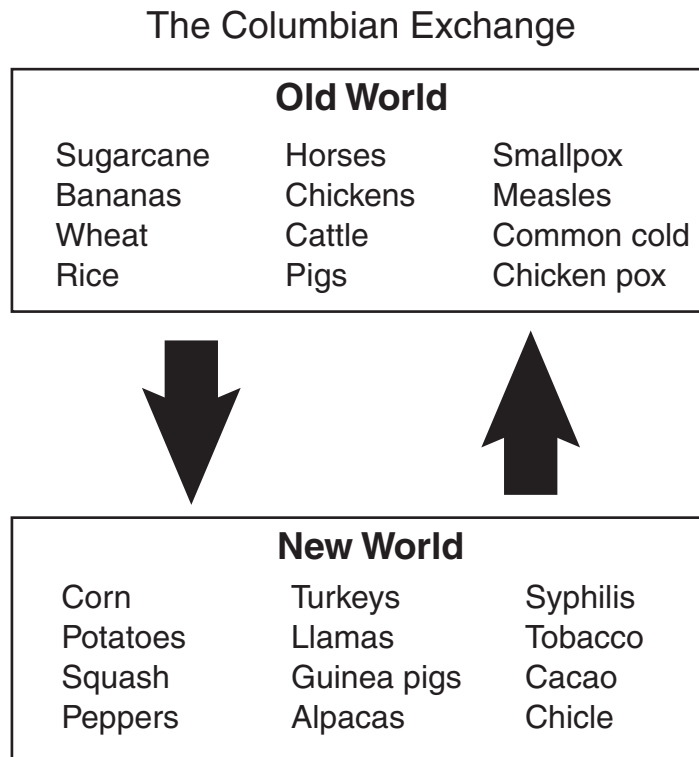
Estimated Indicators of Health in
Selected Countries, 2000–2005

Country	Life Expectancy		Infant Mortality Rate (per 1,000 live births)
	Male	Female	
Australia	76.4	82.0	6
Bolivia	61.8	66.0	56
China	68.9	73.3	37
Egypt	66.7	71.0	41
Turkmenistan	63.9	70.4	49

Source: United Nations

- 54 According to the information in the table, which of the following countries probably has the lowest standard of living?
- F** Egypt
- G** Turkmenistan
- H** Bolivia
- J** Australia

Use the diagram and your knowledge of social studies to answer the following question.



- 55 It can be concluded from the diagram above that the voyages of Christopher Columbus to the West Indies set in motion —
- A a series of trade agreements between the seafaring nations of Asia
 - B patterns of cultural diffusion that still affect the way people live
 - C decreased interaction between Europe and the Americas
 - D business practices that favored an isolationist policy abroad

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS
ON THE ANSWER DOCUMENT.



